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Fatal error: Not enough memory

There's a standing joke in the office, where the team teases me about my skewed memory. Almost every time someone suggests an article idea, my standard response is, "But haven't we already done that article?". I then go on to explain in detail the article we wrote, only to be met by blank faces. Someone then quickly searches through our PDF archives and jovially retorts, "Yeah. We did that story in 2004. A lot of new stuff has happened since then." Peals of laughter follow.

Over eight years of writing and editing articles for the same magazine does that to you. Someone once called it "time compression", where I vividly remember articles, but forget how long ago they were written. Of course, I also remember every conversation about articles that I've had on the phone with a team member, but I don't know a single person's phone number, despite calling them 987235 times a day!

It's a form of selective memory that all of us are being forced into – our brains just delete old information the way you clean up your drive to free up some space for new information. I'd love to believe that our brains are sending only useless information to the recycle bin, but I seriously doubt it.

As I've said before in this space, (September 2009 – I looked up the PDFs because I couldn't remember when) teachers feel that long term memory is reducing with each generation. A lot of kids today easily forget what they learnt just a few days ago, unless the teachers find a way to make it a familiar form of learning, and put it up as a video, or make a clickable and fun interface. There's just too much information, and most of it useless.

Adults also rely too much on technology to do just about anything. We use reminder software to tell us what to do today, and rely on Facebook to tell us whose birthday it is. A lot of us don't remember what we studied in college, and some of us even forget our own passwords!


In terms of tech, most people have software knowledge, but very few hardware skills. I've interviewed geeks who have been coding for 4 years, but never

assembled a PC themselves. If we get a virus, or screw up some system setting, we Google the solution and fix the problem. If the same problem recurs a week later, we probably will not remember the solution and just Google for it again.

A tiny new section called Space Age that we've started this month is what prompted this column. The topic of the month is solar flares, and looks at whether there really is any threat to the Earth from our own sun. Some scientists suggest that electromotive forces or electromagnetic pulses could wipe out all technology on Earth. Such an event, if it were to happen, may not result in the annihilation of the human race, but it would certainly cause billions to take a few steps back on the evolutionary chain.

If Hollywood flicks that deal with the topic are anything to go by, then we're all going to descend into caveman-like animals, where only the physically fittest survive. What would we do without electricity, the internet or our cell phones? If you had to fix a blown transformer today, could you? If we had to live off the land, would we know anything about farming? Very few of us have actual libraries at home that we can consult, because most reading these days is done on screens... However, ask yourself this: how much do you really know without any technology to assist you?

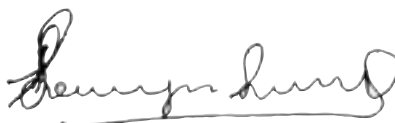
Now I'm not suggesting that you drop everything you're doing and start reading survival guides, build bomb shelters and arm yourself to the teeth. That's crazy talk. It can't hurt, though, to limit our brain's dependence on technology by trying to remember more and click less. It wouldn't be too bad to encourage our children to learn their basics, and to do it through understanding and not rote learning.

I don't think anyone wants to see us head down the path where humanity experiences the ultimate BSOD that says, "Fatal Error: Not enough memory to survive." 



Robert Sovereign-Smith
Executive Editor
editor@thinkdigit.com

"I'd love to believe that our brains are sending only useless information to the recycle bin, but I seriously doubt it"



Liked or hated this column?
Write in to editor@thinkdigit.com
and express yourself.

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Space Age

Your devices are doomed...
...and you may be too!



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Portal 2: Lab Rat Comic Part
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First Orbit
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Impact
Quicksand

<p>Close flip the switch on Flip</p> <p>Close flip the switch on Flip. The switch is a small, black, rectangular device with a flip cover. It is designed to be used as a remote control for a variety of electronic devices.</p>	<p>Gaming tablets: The next step</p> <p>Gaming tablets are a new type of device that combines the portability of a tablet with the functionality of a gaming console. They are designed to be used for playing games on the go.</p>	<p>Intel making profits</p> <p>Intel is making profits from its new line of processors. The new line of processors is designed to be used in a variety of electronic devices.</p>	<p>Apple uses Samsung</p> <p>Apple uses Samsung for its new line of products. The new line of products is designed to be used in a variety of electronic devices.</p>
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Redefining sleekness but what else?



Panasonic's "Gyutto"

Panasonic's "Gyutto" bicycle will be capable of carrying a person and two infants uphill thanks to a motor powered by a 8Ah lithium-ion rechargeable battery

Michael Dell wants more

Michael Dell, CEO Dell is planning diversification into services, data center, security, virtualization, networking, software and enterprise with Dell's past four year acquisitions

d That's a good idea Siddharth, a small QR code can be given along with the links enabling readers to scan and visit that web page. Look for it soon.

- Siddharth

e I think you all are the best magazine creators ever and I'm not saying this to Robert or Siddharth. I'm saying this to the whole team. I have learned social networking and much more from Digit. Every time I read your editorial Robert I'm filled with joy! But one thing about Digit is that you review only one or two games in each issue. As I'm a gamer I want some game reviews like Smack down vs Raw 2011 and NFS Carbon

- Ishan Pathak

d Yes, we do not focus too much on game reviews, but we plan to change that, and are also looking to offer something special in our regular issues. We can't reveal our secret plans, but we will tell you that you will not be disappointed.

- Robert

e I should have written this two months earlier but laziness put it off. Your February DVD was super but for one shortcoming. You missed giving us the two pieces of coloured plastic sheets and a cardboard cut out to make the anaglyph eye ware. It would have cost you next to nothing when done in bulk and been very interesting to watch the stereo movies, instead of going around finding the right shades of the filters. And in April issue the Android testing though exhaustive missed the new Xperia Arc. It's already in the market, and seems to be the corrected version of Xperia 10i. These are not brickbats but only friendly feedback.

- Dr. Hari Krishnan

d Glad you like the DVD contents. Stuff required for making an anaglyphic glass can be found very easily, in fact you can find it in your house, all you need are old glasses and red and blue transparent sheets which can be purchased at minimal rates. There is a full page review of Xperia Arc in this month's issue. Unfortunately, we couldn't get it in time for the test last month.

- Sambhav

LETTER OF THE MONTH

e I have been reading your magazine regularly for about 2 years and this is my second letter to you. While your letters are always flooded with praise, I'm going to tell you where you lack, and why you aren't my FAVORITE magazine. While your stuff is interesting, quality needs to improve.

1. Most of your content is for advanced users only and cannot be understood by beginners. Adding a few pages just for beginners can even up the things.
2. Games are not properly reviewed and most of them are not rated. I think including their prices, ratings etc would attract the gamers since many of the readers just see the ratings and read the review in nutshell which saves their time.
3. I think the pages should be increased considering the hefty price we have to pay for the magazine.
4. The Fast Track is not attractive at all.
5. The prices of products you publish are much higher in the market than depicted in your magazine. Otherwise the magazine is perfect but there is a need to iron out some issues if you don't want to lose your reader-base.

- Aditya Jain

d We don't stuff our magazine with "praise" in fact we're one of the first magazines in India to print mails that are critical of us as letters of the month, just as we're doing with yours.

We appreciate honesty and listen carefully to all criticism. I'll address your complaints in order.

1. Where we place ourselves is an important aspect of why we're the most popular technology magazine. If it were too simple, you'd get fed up of it in a few years, if it were too hard, you'd drop it after the first issue you bought. We like to take topics that are usually hard to understand or scare people, and then simplify them as much as possible. In time, however, you will start finding the things you struggle to understand today to be very easy to grasp. Of course I will look into trying to make things even easier to understand.

2. Agreed. Will fix.

3. Hard to do, we already provide more content than any other magazine of similar price, and do it at significantly reduced profits than the others, but I will see what I can do.

4. The Fast Track started as a booklet for novices, actually, and since then has migrated into a special one-topic demystified book. In fact some of our competitors have re-arranged their own content to try and mirror our Fast Track. I do agree though, that every now and then we need to go back to our roots and do a more easier to read Fast Track.

5. The prices are usually higher than market rates actually, write in again and tell me which products you find over-priced, and I'll look into to see if someone's making a mistake in some places.

- Robert

e I am an avid reader of your magazine. I first read it when my father suggested it to me. We had two magazines in our house one was PC Quest and another was Digit. It was difficult to choose which one was better and I finally chose Digit and I still think that I made a good choice. I suggest you not to discontinue your demo versions of FIFA in your DVD, and a Digit on gaming would be really good, it can contain anything about gaming - 3D gaming, console

gaming, anything! Please remove music from your user interface of your DVDs

- Shankha Shuvra Das

d We provide the latest game demos as and when they release. We've given FIFA 11 in our DVDs before. A lot of readers like the background music, but if we get more brickbats than praise for it, we'll stop giving it. Also, requests for more gaming content are being heard loud and clear, don't worry.

- Sambhav

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OM 1636

More details on Oak Trail

According to Intel, around 35 tablets and hybrid designs with the Oak Trail processor will start shipping from May onwards

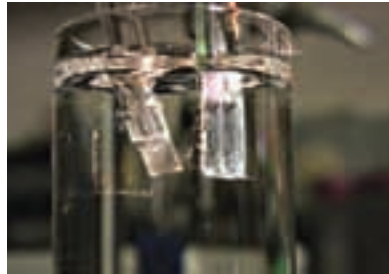
Xeon E7 designed in India

Intel India Development Centre apparently spearheaded the design of Intel's latest server processors

Tata and MIT develop inexpensive artificial leaf; the Holy Grail of energy research

A team of researchers at MIT's Nocera Lab, headed by Dr. Daniel Nocera, claim that they have invented a durable playing-card sized artificial leaf using inexpensive and readily available materials and technology – therefore making it the first practical artificial leaf technology. Previous attempts at creating artificial leaves, or, man-made devices that perform photosynthesis, have been very expensive, and not durable.

According to Nocera, the breakthrough came with the discovery of a cobalt catalyst that did the same job more exotic materials were trying to do. The artificial leaf is 10 times as powerful as a natural leaf at



Artificial-LEAF

photosynthesis, and, that this figure will go up quickly once the technology is perfected. To be clear, the artificial leaf doesn't actually create energy directly for consumption, but rather, uses sunlight to split water into oxygen and hydrogen, economically. For now, the two elements are then used to generate electricity in a separate fuel cell, however, in

the future, an all-in-one device is possible.

Nocera's artificial leaf has been successfully tested to run continuously for 45 hours without a drop in output. Nocera says that soon enough, a leaf placed in a gallon of water and left in the sun could provide a home with basic electricity for a day. Almost any type of water can be used, including waste water. The future of the technology is certainly impres-

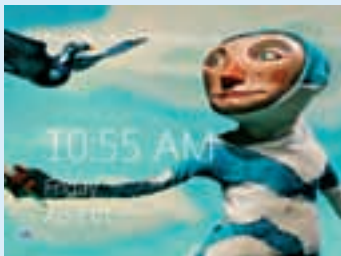
sive, with Nocera hoping to power the entire planet with a swimming pool worth of water - changed daily.

Indian giant, the Tata Group, has invested significantly in the technology, and is currently working with Daniel Nocera and his company – Sun Catalytix – to commercialize his artificial leaf. According to a company spokesman, the efforts are the company's latest endeavour to serve the “bottom of the pyramid.” ■

Microsoft to release Kinect for Windows SDK beta, hacker makes Kinect for PS3

Microsoft ships early builds of Windows 8 screenshots leaked!

Tantalizing bits of Windows 8 have been revealed since June last year, and at CES 2011. Microsoft officially revealed the hardware agnostic nature of the upcoming platform, touting



Windows 8 Logon

support for both ARM and x86 CPU designs. By the end of March however, reports were pouring in that Microsoft has already begun shipping early builds of Windows 8 to key OEMs, such as HP. It is from here that numerous leaked screenshots have appeared.

The leaked screenshots of early builds of Windows 8 show some exciting new features, though none of them can be assumed as final. For now, it seems like there will be more than one Windows 8, each for different form factors. ■

Ever since the Kinect for Xbox 360 was released back in November, developers all over the world have been busy creating Windows drivers for the device, and surprisingly, Microsoft openly

natural user interface experiences, with new state-of-the-art features planned for future releases.

Meanwhile, an Indian enthusiast is working on a project to use the Kinect as a motion sensor for the PS 3



Kinect for Windows SDK

supported this indie-developer movement. This SDK is intended for non-commercial use to enable experimentation in the world of

console, and has already had some success – showing some control over the native XMB interface, as well as the PS3 exclusive game, Killzone 3. ■



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Nintendo to announce Wii 2 soon

According to reports, Nintendo is finally getting ready to show off the next generation of its popular gaming console in June.

Apple releases Mac OS X 10.6.7 update

The update brings general stability, compatibility and security fixes, and resolves the recent MacBook Pro hard freeze issue.

RIA devs rejoice! Mid-cycle Adobe CS5.5 is out

Adobe has announced an upcoming version of their Creative Suite, CS 5.5 and it promises to bring a number of great features for RIA developers. One of the central themes of this release is to enable creation of content for multiple screens, features for which have been added to Dreamweaver, Flash Professional, Flash Catalyst, and Flash Builder among other applications.

CS5.5 includes updated versions of Dreamweaver and Flash Professions, and includes Flash Builder 4.5 and Catalyst CS5.5. It also brings in the new Adobe Acrobat X into the Creative Suite. Adobe Dreamweaver CS5.5 will support emerging

web standards with HTML5 and CSS3. A new multi-screen preview panel lets web developers design for smartphones, tablets and desktops with greater ease by taking advantages of new standards.

Dreamweaver CS5.5 also allows developers to create content for mobiles with greater ease by adding support for the jQuery Mobile framework. Developers can also directly create applications for mobiles CS5.5 also adds the ability to test such applications on an emulator.

Flash Builder 4.5 brings the new Mobile-optimized Flex 4.5 SDK that supports building applications for Android, iOS and soon the Blackberry PlayBook as well. Numerous



improvements to coding workflow have also been made. Flash Builder now also comes in a new PHP-enhanced version in collaboration with Zend. This includes a copy of Zend Studio allowing for development of server side of your application in tandem with the client application.

Adobe now intends to release new "milestone" releases such as CS3, CS4, CS5 every two years, while having mid-cycle releases in between to bring newer features faster without a major release. This means that CS5.5 is not a free

update to CS5, but is cheaper than a full-fledged CS5 to CS 6 move would have been.

In addition to a new release cycle Adobe is also introducing a new model for using CS applications. A new subscription model allows one pay for using Adobe products on a monthly basis instead of an outright purchase. So freelancers or others who cannot afford Adobe products at their retail prices, or those who only need to use the products for short periods of time can pay a subscription price rather than at the full price of the products. ■

Feasible nanogenerators to power future electronics through motion

A team of scientists lead by Dr. Zhong Lin Wang at the School of Materials Science and Engineering at the Georgia Institute of Technology have developed a feasible nanogenerator that could power electrical devices simply by their movement. The study was funded by a remarkable number of institutions, including the Defense Advanced Research Projects Agency, the Department of Energy, the U.S. Air Force, the National Science Foundation and the National Institutes of Health.

According to Dr. Wang, they team has progressed quite a bit from its early days, now offering

power several orders of magnitude higher than before. He added: "This development represents a milestone toward producing portable electronics

If we can sustain the rate of improvement, the nanogenerator may find a broad range of other applications that require more power."



Nanogenerator nanowire array

that can be powered by body movements without the use of batteries or electrical outlets.

Dr. Wang believes nanogenerators will be commercially available within three to five

years. The nanogenerator, seen above, is a flexible chip made up of millions zinc oxide nanowire piezoelectric filaments, which generate electricity if stressed, squeezed or bent. The current iteration of the nanogenerator is powerful enough to drive such electronics as liquid crystal displays, light emitter and laser diodes, and sensors. According to Dr. Wang, five of these nanogenerators piled up together can generate nearly 1 microampere of current at 3 volts, roughly the same as two AA batteries.

As you can imagine, the applications are endless, especially in portable devices, from entertainment to medical. Bio-mechanical/electrical prostheses, machines and implantations could also be powered by such nanogenerators. ■



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Firefox 4.0 up close

We have witnessed Firefox evolve since the Firefox 3.7 days, seeing each piece of the plan fall into place. Firefox 4 will also be the last major change in the history of the browser. Mozilla has recently decided to move Firefox to a faster release cycle like that of Google Chrome and it is likely you will have Firefox 5 in June this year.

A new look

Current trends dictate a smaller UI footprint, as web sites take over many of the functions usually reserved for browsers. Firefox 4 optimises UI space for the content that need to be displayed.

- **No menus:** Firefox has a the new menu that has two columns with the most popular browser options.

- **Tabs on Top:** Tabs-on-top are a much better paradigm than the older tabs below the address bar system as they clarify that the address bar and browser controls apply to the current tab rather than the browser as a whole.
- **No status bar:** Mozilla has gone for a Google Chrome-like transient status bar, and a new add-on-bar for icons.
- **New add-on manager:** The add-on manger has seen a significant overhaul, and not just in looks, but in features as well. The new UI lets you search for locally installed add-ons in addition to add-ons from Mozilla's database. Add-ons show much more detail now, and one can even click on the "more" button to see further detail about the add-on.

New features

Firefox 4.0 adds a number of core features earlier available only via add-ons.

- **Firefox Sync:** This is now an in-built feature. It allows synchronising bookmarks, passwords, preferences, history, and tabs. Setting up sync has also been further simplified – you no longer need to remember two passwords.
- **Panorama:** Firefox Panorama sets the browser apart from all others. Panorama introduces an entirely new way of managing tabs by visually arranging tabs in groups using a thumbnail view and lets you focus on one group of web sites at a time.
- **App Tabs:** This feature is pretty much the same as pinned tabs on Chrome and Opera. Tabs can be collapsed

to showing just the icon of the web site, thus saving space in the titlebar.

- **Restartless add-ons:** Firefox's extensibility comes at the price: add-ons need restarting the browser. Well no more! Firefox 4 lets developers create add-ons in a way that enables installation without requiring a restart.
- **Tab switching from location bar:** When you start typing in the location bar, Firefox now allows you to switch to existing tabs that match your entry.
- **Do not Track:** Firefox now includes an option that lets you opt out of being tracked by web sites. However this feature is of limited use until it is respected by such parties.
- **Multi-touch support:** If you're one of the few using Windows 7 with a multi-touch input device, you will now be able to use gestures with Firefox.

Customise Gmail, and use several other features recently launched

Google has introduced some new features in Gmail, the highlight being customisable themes, which now gives you the ability to personalise your Gmail Inbox with your own background image. You can also choose colours for the interface.

Some of the other new features are from Gmail Labs, and have now been 'adopted' in Gmail. Called 'Don't forget Bob' and 'Got the wrong Bob?', these new features are prompt-based suggestions/corrections that can potentially correct some embarrassing mistakes – similar to the reminders for



You can now customise your Gmail theme

subjects, and attachments. They will crosscheck if you have forgotten to mark someone on an email, or marked the wrong

person, based on the groups of people you email most often. These are quite handy during rush hour work! ■

Overhauled engine

Firefox 4 also includes an overhauled browser engine Gecko 2.0 which has a new faster JavaScript engine, and support for the latest web standards. Firefox now compares well with Google Chrome and Opera in terms of JavaScript performance. It also uses your computer's graphics hardware (like Internet Explorer 9) to boost rendering performance.

With this version, Firefox has caught up with the latest browser scene, although a number of small issues, such as poor tab sync integration and Panorama integration still plague the browser.

In conclusion: Is Firefox 4.0 everything Mozilla expected it to become? Perhaps not, but as the biggest change yet to come in the history of the browser, it is no less significant. ■

Langoor web site giveaway

SMEs, startups, and individuals can win a custom web site worth ₹1 lakh from Langoor Pty, an Australian web design company with R&D roots in Bangalore

Google Commerce Search 3.0

New features include Instant Search, local product availability, and product recommendations

Web Watch

Microsoft's Office 365: free-for-all public beta!

Microsoft has announced that its online productivity suite, Office 365, is now available for anyone to try out, as a public beta. The suite will be accessible in 38 countries across the world, and over 17 languages.

Apart from the usual Microsoft Office programs such as Word and PowerPoint, users also have access to Microsoft Exchange, SharePoint, and Microsoft Lync, for real-time collaboration. Protection comes via the ForeFront security client,



Microsoft Office free for all?

and Microsoft promises 99.9 per cent uptime for the service. The launch of Office 365's beta is accompanied with a beta of Office 365 Marketplace, which

helps users of Office 365 find a variety of apps and services from Microsoft and its partners. Log on to Office 365 at - <http://bit.ly/fb70XJ>

YouTube rolls out live streaming site

Google recently announced its interest in revitalising the YouTube platform, by streamlining channels based on popular topics and categories. Each channel will feature professional-grade YouTube-commissioned content apart from user-generated material.

In this manner, Google is not just bolstering the ever-embattled profitability of YouTube by



bringing more than just user-generated and viral content to the living room, but also giving Google TV a whole new source to feature quality content for free. If successful, it would also manage to carve out an exciting new ecosystem for the humble web video.

YouTube also finally rolled out a free-for-all live streaming section, called YouTube Live (www.youtube.com/live). The service features numerous live-streamed shows, as well as sporting events. You can also add upcoming episodes to your Google Calendar. It is currently tying up with major content providers, and partner web site for original content in India.

In related news, YouTube also partnered with Indiatimes to broadcast live streams of IPL matches, apart from highlights, and previous tournament footage.

bharti airtel launches Photo Service for its broadband customers



Manage all your photos on your airtel Photo Service account

bharti airtel has launched a digital photo printing service for airtel broadband customers, in association with leading photo service, Zoomin.com. Using "airtel Photo Service", users will be able to upload their photos online, and have them printed and delivered to their doorstep.

Apart from printing photographs in matte, gloss and luminous print finishes, airtel Photo Service gives users additional media to choose - from T-shirts to mugs, and calendars to photo-albums, which can all be customised with personal messages, themes, and clip arts. Along with online editing tools, users have a handy organiser to create cus-

tomised collections. Users will also be able to store an unlimited number of photos online in their airtel Photo Service account, and can also import albums from Facebook.

The service is available only for airtel broadband users. To further simplify things for them, users don't have to make any payment online via credit/debit cards. Instead, each item purchased will be billed to the monthly airtel broadband postpaid bill, using a 'pay per instance' feature to keep track of items. Photo products available on airtel Photo Service ranges from ₹65 to ₹595, inclusive of applicable taxes and delivery charges.

For details on the complete product portfolio, you can visit www.airtel.Zoomin.com

LG releases Optimus 2X and Black

LG has released the Tegra 2 dual-core powered Optimus 2X for ₹30,000, and the super-slim Optimus Black for ₹27,000. For more details, go to <http://bit.ly/fvDix9>

Apple iPad 2 available in India

The price of an Apple iPad 2 via e-commerce in India varies between ₹34,900 for the Wi-Fi only 16GB tablet, up to ₹64,901 for the Wi-Fi + 3G 64GB version

Samsung introduces Galaxy Tab 10.1, 8.9; Galaxy S II gets 1.2GHz; bada 2 coming to India first

Samsung showcased the Galaxy Tab 10.1 and 8.9 Android Honeycomb tablets at its Samsung Unpacked event, surprising everyone with a brand new super slim design. At just 8.49 mm in thickness, which is lesser than the 8.8 mm Apple iPad 2. Both the Galaxy Tab 10.1 and 8.9 are nearly identical in terms of looks, differing only in screen size – though they have the same impressive WXGA 1280x800 resolution.

The two Honeycomb tablets are competitively priced with the 16GB Wi-Fi-only 10.1-inch model priced at \$499 and the 32GB model at \$599, while the 16GB Wi-Fi-only 8.9-inch model will retail for \$469, and the 32GB model for \$569. For now, only Wi-Fi models of the two tablets have been announced, though 3G and 4G HSPA+ tablets were detailed. While Samsung has still

not revealed the exact nature of the 1GHz dual-core application processor that powers both tablets, it is still assumed to be NVIDIA's Tegra 2 offering, instead of Exynos processor. The large 6000 mAh and 6860 mAh batteries are expected to give about 10 hours of video playback. Both tablets also pack Wi-Fi a/b/g/n connectivity, will support Flash 10.2, and have dual speakers for stereo surround sound.

Samsung has also announced a speed bump for its flagship Android phone, the Samsung Galaxy S II, which now goes from a 1 GHz dual-core Exynos processor to a 1.2 GHz dual-core processor, presumably with a BIOS update instead of an actual chip upgrade.

Also to be noted, is that the Samsung Google Nexus S (with Super LCD screen) has been officially launched in India, at

₹30,400 (MRP). Online retailers such as Flipkart have been quoting a much lower pre-order price of ₹27,999 for a while now, so expect prices to significantly lower than the MRP, especially as the prices of the original Galaxy S are still falling.

Samsung India has also announced that the bada 2.0 operating system will

arrive in India before anywhere else in the world, in July. It will bring a new UI, SDK support for Linux and Mac, third party SNS integration, HTML5 support, WAC compatibility, and Flash Lite. Features like operator billing support are also expected. ■



HTC Sensation features 1.2 GHz dual-core CPU, Sense 3.0 UI

HTC has confirmed that the rumoured super-phone, the HTC Pyramid, will be releasing in May or June, and will be called the HTC Sensation. The name is especially appropriate, as the device is the first to sport HTC's latest custom UI, HTC Sense 3.0.

The HTC Sensation will be one of the most powerful phones in the market when finally hits the shelves, with a 1.2 GHz dual-core CPU and Adreno 220 GPU onboard, part of Qualcomm's latest Snapdragon MSM8260 chipset. It sports 768MB of RAM. Its 8MP rear camera supports 1080p HD video recording at 30 frames per second, and, it has a 4.3-inch SuperLCD display with a 480x800 pixel resolution. Its

1,520 mAh battery is rated to deliver up to 400 hours of standby time, and up to 6.5 hours of talktime.

The most obvious comparison to be made is between this and the Samsung Galaxy S II, which the company introduced at MWC 2011. Both are Android Gingerbread devices that feature 1.2 GHz dual-core processors, and 4.3-inch displays. Unfortunately for HTC, on paper, the Galaxy S

II outshines the HTC Sensation, with more memory, onboard storage, a higher-resolution screen, better front-facing camera, dual-LED flash instead of single, document editing abilities, and USB on-the-go. ■



Windows Phone 7 NoDo update arrives; Mango detailed

Microsoft has released its first Windows Phone 7 update, codenamed NoDo, which brings the much vaunted Copy and Paste functionality to the platform, as well as other performance and interface enhancements, including better application and game performance and reduced load/resume times, improved Windows Marketplace search functions, and enhanced Wi-Fi connectivity and configuration options.

Other improvements include some Outlook interface and compatibility enhancements, better Facebook synchronisation, improved MMS reception and display, and, another much wanted feature – stability while switching between video and still camera modes.

The MIX 11 conference was the venue for Microsoft detailing the Mango update, which will bring features such as true multitasking, built-in hardware acceleration for Flash and video content and more complete Xbox integration, including a possible controller interface. ■



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* Actual battery operating may very depending on the usage

Features:-

- **OS:** 3.5G Android 2.2* • **Processor:** ARM11 600MHz • **Chipset:** Qualcomm MSM7227
- **Internal Memory:** 512MB • **Multimedia:** Microphone and speakers
- **Cellular Network:** GSM 850/900/1800/1900 UMTS 850/1900/2100. Brand I.I & V
- **Flash:** 512MB NAND flash and micro SD Expandability up to 32GB
- **Display:** 7" LCD screen 800x 400 resolution capacitive multi-touch screen
- **Brightness (NIIT):** 350 cd/m²
- **Camera:** Built-in camera: 3 megapixel auto focus (back) and 0.3 megapixel camera (front)

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Samsung Noodles

In the 1930s, the present day Samsung used to sell noodles and food products

Apple iPhone 4 India

Bharti Airtel and Aircel have announced they will bring Apple iPhone 4 to India "in the coming months"

HTC launches Incredible S, Desire S smartphones, tablets and more

HTC has launched the Incredible S and Desire S smartphone in India, both of which feature Android 2.3 Gingerbread, and updated specifications from their predecessors. The HTC Incredible S was launched in India with a Super LCD screen, and was priced at ₹28,990 (MRP). The HTC Desire S was launched with a price of ₹25,490.

The HTC Desire S has the same aluminium unibody style as the HTC Desire, the same 3.7-inch SuperLCD screen with Gorilla Glass, and the same autofocus 5MP camera, also capable of 720p HD video recording.

It features the updated Qualcomm MSM8255 chipset, with a new 1 GHz Scorpion processor and Adreno 205 GPU. It also has a slightly larger battery, at 1450 mAh, and more RAM at 768MB, but, HTC

has done away with the original Desire's optical trackpad.

The HTC Incredible S has the same large 4-inch display as the HTC Incredible, this time coming with Super LCD to India. It also has Qualcomm's updated MSM8255 chipset, featuring a 1GHz Scorpion processor, and the Adreno 205 GPU. It operates on 768 MB of RAM, and 1.1 GB of ROM. It has an 8 MP autofocus camera onboard, equipped with dual-LED flash and image stabilisation, which is also capable of recording 720p HD

video at 30 frames per second. It also has a secondary front-facing 1.3MP camera for video calls.



HTC also announced a new glasses-free (autostereoscopic) 3D Android phone, called HTC EVO 3D. It has a massive 4.3-inch qHD display with a resolution of 540x960 pixels. It has two 5MP cameras on the back, to capture 3D video and images. Video recording is up to 720p HD, and, still 3D image capture is up to 2MP in resolution. It features a 1.2GHz dual-core CPU just like HTC Sensation, except this is part of the MSM8660 chipset, with an Adreno 220 GPU onboard as well. It comes with 1GB of RAM.

HTC introduced a new tablet as well, which is identical to the HTC Flyer, except, it bears both CDMA and WiMAX radios, and, its aluminium unibody is black instead of the silver of the Flyer. It bears the same specs all around – the same 1.5GHz single-core processor, Gingerbread OS, and 1024x600-pixel screen. ■

Amazon better than Android

In a move that still shocks with its temerity, Amazon has launched the Amazon Appstore for Android, meant for both phones and tablets. Including free as well as paid apps, the online retail giant supposedly decided on Google's mobile platform because of its rapid growth and open nature.

According to Amazon, the very 'rapid growth' of the platform implies that consumers are hard-pressed to discover apps that suit them on the Android Market – and with Amazon's long experience in the online retail segment, it can help shoppers better. Rumours of an upcoming Android-based



Kindle device or an Amazon-branded Android tablet also fit seamlessly into the strategy.

Amazon has also taken the onus of testing each app for malicious code before listing it on their store. The store will also only list applications that comply to its content guidelines, implying that it will be clean of adult/pornographic material, unlike the Android Market. Amazon Appstore also offers its own one-click payment options that people might just prefer to Google Checkout. Prices will also be competitive with Android Market rates. The Amazon Appstore will also feature one paid app available for free daily. For more details, go to <http://bit.ly/h7TcOF>. ■

MTS offers Android-based HTC Pulse free with one year contract in India

MTS has launched its first CDMA smartphone in the market, the Android 2.1-based HTC Pulse, which also happens to be the first operator-subsidized smartphone in the country – it comes free with a one year contract that has a post-paid monthly data plan of ₹1,500.

With the plan, users will get 1,500 minutes of talk time, 1,500 messages and 1,500MB of data every month for the first 12 months. The phone can also be

purchased separately from MTS for ₹18,000.

The HTC Pulse doesn't shine brightly in the face of its competitors, but for free, it will definitely attract those not looking to spend on a smartphone, but want one nonetheless. It has a 528 MHz Qualcomm MSM7600 processor, 256MB RAM and 512MB ROM, a 5 MP camera, and 3.1 MBps CDMA EVDO 3G connectivity. Its 3-inch capacitive touch-



screen has a 320x480 resolution. The phone also supports microSD cards up to 32 GB. The phone has a 1300 mAh Li-ion battery that is rated to deliver up to 3 hours and 34 minutes of talk-time, and a standby time of 373 hours. It weighs 120 grams.

Apart from the usual Android ecosystem on offer, users can also use Apalya for mobile TV, a service MTS has tied up with. ■

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*TV should have capability to play Internet contents.

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Cross-site scripting

Cross-site scripting (XSS) accounts of nearly 80% of all security vulnerabilities according to a Symantec story in 2007

Open Web Application Security Project

The OWASP community releases numerous tools and even an entire Linux distro aimed at testing the security of web applications

A look at modern browser security features

Most browser vulnerabilities are due to the problem that exists between the keyboard and the chair. There is no patch for that yet

Kshitij Sobti

kshitij.sobti@thinkdigit.com

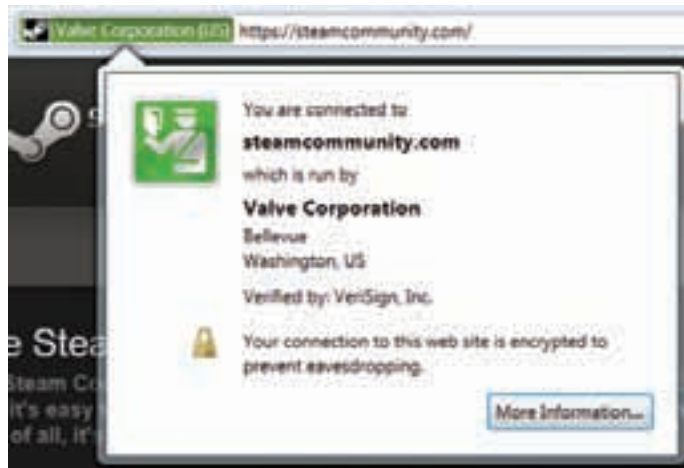
As a greater part of our lives start involving computers, and more so the internet, it becomes clear that there is a lot of information at stake. One can today buy items online using a variety of payment systems, all of which hinge on a few protection factors (a few numbers, a user name and password etc.) that can easily be captured.

No matter what browsers vendors do in securing their browsers, and web sites do in securing their infrastructure and code, more often than not, the end-user is the source of the gravest vulnerabilities. Whether one is vulnerable to pornography, or photos of cute kittens playing with string, chances are that the end-user initiated the action that has left their computer attacked.

As a result, a large number of the features that are being introduced in newer browsers are those that protect users from their own mistakes, rather than countering technical errors. Let us take a look at some of the ways modern browsers are protecting users from the internet and themselves.

Enhanced address bars

The browser address bar is a perfect example. Despite wide promotion, people rarely confirm the identity and security of the web sites they visit. Browsers have thus added visual indicators of the security of the connection and authenticity of



The Opera and Firefox both use similar means to convey security status

the web site. This may be trivial, but URLs are an important part of the web, and thus, so are address bars.

All browsers have slightly different ways of displaying this information, but all of them try to make such information as clear as possible. All browsers have some form of security / authority badge that can be clicked to reveal more information about the connection / web site.

Private browsing

Private browsing may have been invented for "love-struck fiancées shopping for

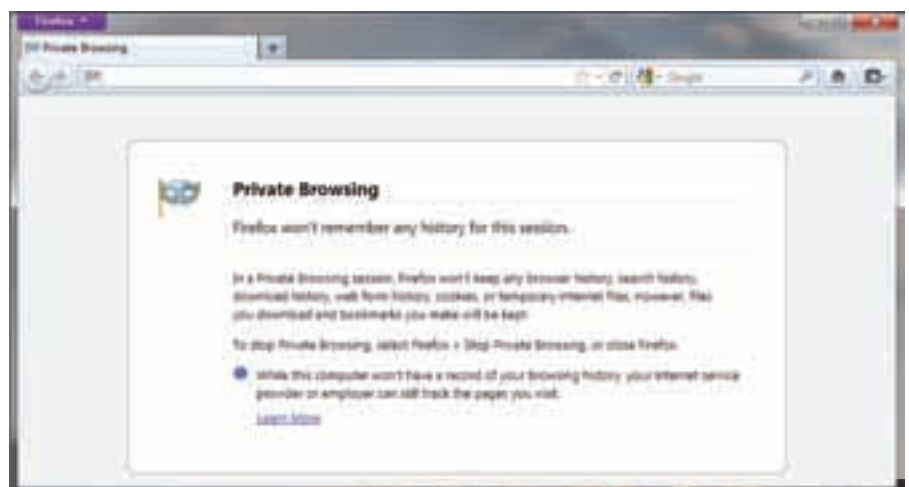
engagement rings" online, however it is a good security feature as well. It is of great benefit while using web sites that need extra security (bank web sites and PayPal) or a public computer.

In private browsing mode, the browser does not record any of your activities while you

are using it. Google Chrome even disables extensions – unless you specifically allow them – in this mode, thus plugging any sources of leak of data. All browsers support this in slightly different ways. IE and Chrome can open private windows, Opera can even open private tabs, while Firefox and Safari can work in either private or normal mode.

Phishing and malware protection

As an internet citizen, you may be wondering, "how is phishing and malware my fault!"



Private mode in Firefox

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AntiSamy

OWASP's AntiSamy project secures web applications by ensuring that there is no malicious code being supplied by clients using their service

Pwn2Own

This yearly hacking contest requires hackers to exploit browsers and devices for a cash prize, and the device they hacked.



Firefox protecting from malware

Well, because you fell for it. To make a loose analogy, you wouldn't just go to an address because a friend of a friend's elder brother's friend's friend said they have a good selection of boots. However we indiscriminately click on suspicious links that could take us anywhere.

Browsers do not come with inbuilt phishing and malware filters that check the URL you are visiting against a database of malicious URLs, and blocks access to entries that match. Most scan URLs that start circulating on the internet end up here sooner or later.

Google's malware and phishing databases are used by Mozilla Firefox, Safari and Google Chrome (obviously), while both Internet Explorer and Opera use data from Netcraft which has tested to be superior to Google's data.

Sandboxing

Currently this technology is only properly implemented in Google Chrome and Internet Explorer.

Google Chrome creates separate process for the main browser, extensions and tabs such that nearly all tabs run in a separate process (tabs from the same site might run in the same process). Additionally, web sites run in a sandboxed process that has limited access to the computer's resources. As such, even if a browser exploit in a tab were to succeed, it would fall to deaf ears as the tab itself doesn't have the privileges to execute the exploit code. Google Chrome also sandboxes the Flash Player,

extending security to the plugin.

Internet Explorer introduced a new protected mode with IE7 that ran the entire browser in the sandbox, because of this trying to open a local folder in the browser resulted in the browser opening a new window. IE8 added multiple processes so that each tab could run in a separate process and

thus individual tabs could be in protected mode (sandboxed) while others could point to local folders.

While running a sandboxed browser you could open malicious links, and probably your computer would still not be damaged, don't do it though, that video of a monkey sniffing its rear is not worth it.

Content security policy

The sheer brilliance of the web lies in being able to mash up data coming from different sources on the internet. This however also poses numerous risks, as many web sites have malicious content. An insecure web site can be vulnerable to SQL injection, CSRF (Cross-site request forgery) and XSS (Cross-site scripting) attacks.

Mozilla's new Content Security Policy allows web sites to specify the domains from which the web sites can receive scripts, and only scripts from those domains will be executed. Web sites can even globally disable scripting if their site doesn't need it.

Content Security Policy doesn't immediately make a web site secure, it merely adds another layer of security that increases the difficulty of hacking a web site. Currently it is only present in Mozilla Firefox 4 and in implemented in few sites (including Twitter), but support for it is bound to increase.

Security and you!

Browser vendors are coming up with increasingly intelligent methods of

Anatomy of a flaw

Not all flaws are user errors of course; often browsers (or the components that they rely on) have faults that leave the system compromised. Let us take a look at one such flaw that affected a number of browsers:

Title: Remote code execution using malformed PNG image

Description: "OUSPG researcher Aki Helin reported a buffer overflow in Mozilla graphics code which consumes image data processed by libpng. A malformed PNG file could be created which would cause libpng to incorrectly report the size of the image to downstream consumers. When the dimensions of such images are underreported, the Mozilla code responsible for displaying the graphic will allocate too small a memory buffer to contain the image data and will wind up writing data past the end of the buffer. This could result in the execution of attacker-controlled memory."

Here such an image could be posted in a social networking website and might be viewed by someone without realizing what is happening in the background. This image could cause a crash, or worse allow an attacker to compromise your system.


While what we have printed above is from a Mozilla Foundation Security Advisory (MSFA2010-41), this issue affected many applications using libpng, including Chromium.

securing their browsers, but as they say, built a more idiot-proof system, and bigger better idiots will appear.

Browser security will always be a close battle, with newer threats emerging continuously and new methods of stopping them coming soon. Every once in a while, browser developers will figure out a type of attack before it is ever used, but usually there are casualties.

Computers are thrust before people long before they have an understanding of what is possible and the implications of their actions. Clicking on links seems harmless enough, and there isn't always a clear feedback like the one a child receives after putting his hand on a burning object.

The answer as always lies in education. Tech yourself, teach your friends how to be safe on the web, and to use their browser's security features to their advantage.

Against stupidity, the gods themselves contend in vain — Friedrich Schiller. 

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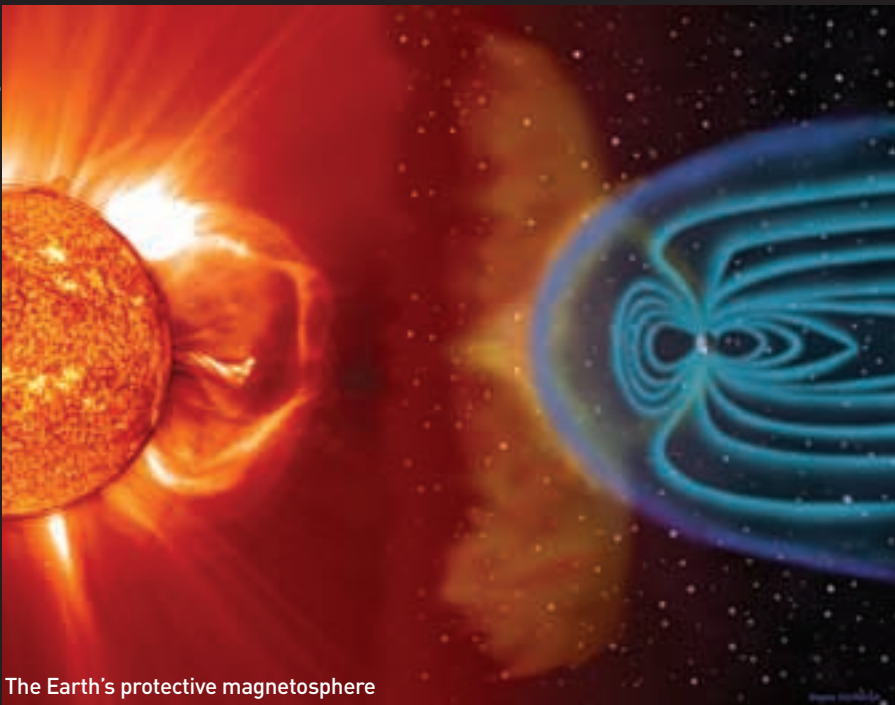
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Your devices are doomed... ...and you may be too!

Image: NASA



The Earth's protective magnetosphere

Thanks to Hollywood, all of us now know that the Mayans believed that the world would end in 2012. Of course we may have got it all wrong, and Mayan priests and historians who actually speak the language translate the whole thing into a “refreshing new start”, but that’s not as exciting as Armageddon, is it? It takes a lot more to destroy a planet than it does to kill humanity, and to paraphrase from a famous documentary, billions of years from now the Earth will still be here, mankind won’t.

RA – GOD OR GOON?

The ancient Egyptians believed that the sun was a god, the creator. The sun meant light and warmth, which was considered essential for survival. Of course, even today we know that without our sun our planet would be just a hunk of cold rock and ice, and so the title of creator might actually be fitting.

However, he who creates can also destroy!

SPACE CLIMATE

Most people consider space to be a lifeless, absolute-zero void, so to consider that space actually has a climate seems far-fetched. The truth is, within our solar system – as it is within almost every one of the trillions of solar systems out there – there is a very active climate system. The sun isn’t just a super-massive ball of burning gas; it also has storms, eruptions and as some would put it, mood swings. It’s almost alive, and temperamental, and can cause us a lot of harm when it’s angry!

Solar weather is caused by the intense heat that makes the sun what it is. At these temperatures, gasses such as Hydrogen and Helium are broken down into ions (electrons and protons), and form plasma – the fourth state of matter after the more popular solid, liquid and gaseous states.



Makes you feel miniscule, doesn't it?

Although plasma is basically a gas with ionised particles, unlike gasses, it is very prone to magnetic effects, and this causes a massive magnetic system on the sun.

Just like our weather, the solar weather has a cycle, and it’s about 11 years long. From periods of increased activity and clearly visible sun spots to lulls and then back again takes 11 years. Since the solar cycle is magnetic based, the sun actually reverses its magnetic poles once every such cycle. Thus the magnetic cycle (north to south and back again) actually takes 22 years, but since no

WATCH THE SUN IN ACTION

Make sure to visit <http://bit.ly/VbgUU>, and check out the way scientists are tracking solar flares and coronal mass ejections.

You can select a time frame and watch the sun’s activities at fast speeds. And remember, never look at the sun with the naked eye or you could do some damage..

one cares which way a compass points on the surface of the sun, and we’re all a little more concerned about solar flares and the like, 11 years is the accepted climate cycle that everyone remembers.

SUNNY DAYS

Sun spots are basically the areas in which the largest magnetic storms rage on the sun.

GEOMAGNETIC STORMS

When solar events occur, radiation and ion particles released from the sun can cause interference with the earth’s magnetic field. When a large such event happens, the Earth can experience an electromotive force, which can knock out technology such as satellites and power grids.

SOLAR SUPER-STORM OF 1859

The only recorded solar superstorm in known history, this CME event was so large that aurora borealis were seen as far south as the Caribbean! There were also some reports of miners in the Rocky mountains waking up in the middle of the night to fix breakfast because they thought the Aurora Borealis was early morning sunlight!

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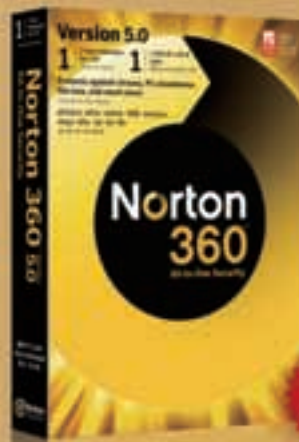
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Left: The International Space Station will be at risk from the sun | Right: Even the sun has a climate cycle – a season is about 11 years

All this magnetic induced turbulence causes electrons and plasma to mix into a deadly cocktail that eventually explodes with the power of a hundred million Hiroshima's. Plasma is sent shooting out of the surface of the sun, several lakh kilometres above and then gets pulled back. However, sometimes these explosions are supermassive and end up actually travelling away from the surface of the sun into space. These are called coronal mass ejections (CMEs) and at times contain nearly a third of the Earth's mass!

Of course, most often these CMEs send plasma out into space away from the Earth, but often enough, they send plasma hurtling straight for us at 1,000 Km per second!

That's when scientists and astronomers get a little hot under the collar.

KILLER PLASMA FROM OUTER SPACE

Although Earth's own magnetic field is quite capable of handling the sun's regular tantrums, there are two matters that concern scientists.

First, if the sun were to spit venom directly at us in the form of a superstorm-caused CME, all of our technology could be in serious danger. Electromotive forces could cripple everything that's not secured in a Faraday box.


Secondly, the Earth has been known to swap magnetic poles every few hun-

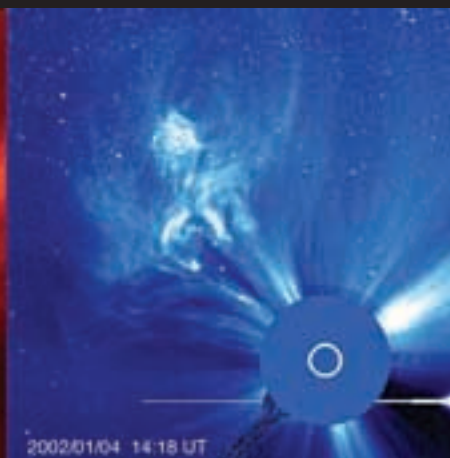
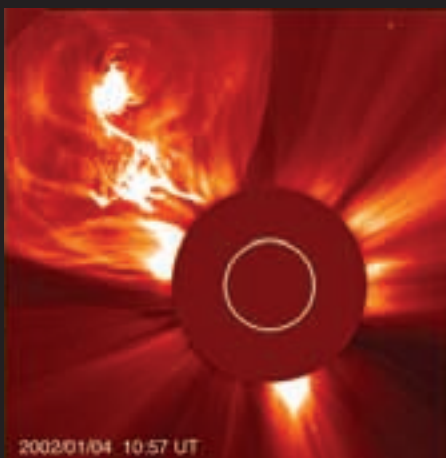
dred thousand years, and the last flip was roughly 780,000 years ago – we're long overdue.

THE REAL GLOBAL WARMING

The problem with the Earth's polar switch is that it will disrupt the magnetic field and leave the Earth relatively unprotected from the sun's fury for anywhere between 4,000 to 7,000 years. Looking at ancient lava flows, scientists have discovered that during this period, although the Earth's magnetic field does drop, it doesn't drop to zero.

Still, 4,000 years with reduced protection against the solar wind will play havoc with life on Earth. Birds will not know which way is south, and die off. Increased solar effects reaching us will mean increased radiation, and as a result more deaths from cancer. Satellite communication will become near impossible, and since the atmosphere will expand due to the heat, we might even find it harder to breathe – just like when you climb a mountain.

We can forget about our Android phones and iPads; because electricity will be scarce. If you can't bear the heat or cold during a power cut, and get bored in 15 minutes without a gadget, think about what our civilisation will endure if most of it had to go a few thousand years without electricity? 



Solar flare captured on an ultraviolet sensor, an angle and Spectrometric Chronograph

TIMING MATTERS

A study suggests that timing is important when thinking of conceiving a baby. Apparently, those conceived and born during a peak in the solar cycle, on average, live 1.5 years less than those conceived and born during a lull in solar activity.

RECESSION AND THE SUN

Another study suggests that the stock market closely follows solar activity. When the activity in a solar cycle is increasing, so do stock market indexes, and when there's a lull, well you get 2008 nightmares. An interesting read: <http://bit.ly/f6qUgk>

CORONAL MASS EJECTIONS

Imagine a giant geyser spewing outwards, millions of miles into space, and at temperatures that form ionised plasma. That's what happens on the surface of the sun all too often. One such large CME caused the Solar Superstorm of 1859.

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GA-HA65M-UD3H-B3	GA-H61M-D2-B3	GA-G41MT-S2P	GA-880G-USB3	GA-880GM-USB3L	GA-MA78LMT-S2P	GA-M68MT-S2P

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Heard of Laser ?

Now meet the Spacer. Essentially a laser but one that is just 44 nanometers wide. The spacer could one day replace transistors.

Faster Internet

A new protocol called SPDY is proposed that could help reduce latency. Initial experiments have shown 64 % faster load times. Read the white paper at: <http://bit.ly/digitspdypd>

Faster computing Redux

In our “Speed up your life” December 2010 issue, we introduced you to a few concepts from cutting-edge science that are poised to speed up computing like never before. In this follow-up, we take you further up the computing tunnel to bring you updates on technologies that are closer at hand and the ways in which they aim to counter the ever impending bottleneck cataclysm

Siddharth Parwatay
siddharth.parwatay@thinkdigit.com

At the heart of computing lie a few key components such as microprocessors, memory and storage. Over the years, scientists have been pushing the laws of physics to make these components do much more, at a much faster rate. Let's consider microprocessors – they can perform fantastic calculations because of the sheer number of silicon transistors that are packed into them. To give you an idea, consider the first CPU on a single chip – Intel's 4004. It had approximately 2,300 transistors. From there, chip-makers shrunk manufacturing processes to crunch in more transistors on to a chip, till finally the i7 quad-cores of recent times contain 731 million transistors. But as the transistors are getting smaller, the problems faced by scientists are getting bigger.

Moore's Law, which most of us are familiar with by now, states that the number of transistors on a chip will roughly double every two years. So far



the prediction holds true like clock-work. But let's look at transistors, first, to understand what these inevitable problems of the future are. At a basic level, a transistor can be thought of as a small On / Off switch. In the On state, it lets current flow; while, in the off state, it breaks the circuit. When one transistor (that represents either a one or zero, depending on its current state) works in conjunction with a million others, the chip is able to deal with huge amounts of data at amazingly fast

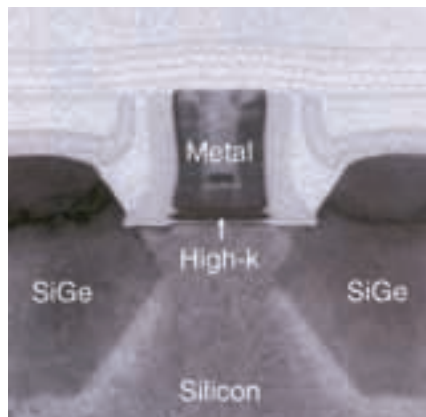


Image of Intel's transistors with Hafnium-based high-k metal gate silicon

speeds. Micro-transistors such as these are made possible because of a peculiar property of silicon (as a semiconductor) to carry current not as well as proper conductors such as metals. But silicon, too, has limitations. When you shrink transistor sizes to such unimaginable levels, there are issues with power consumption, heating, leakages, etc that creep in. In his book titled 'Fundamentals of Nanoelectronics', George Hanson makes a startling prediction that puts the problem into perspective. “With the current technologies, if the rate of increasing device density were to continue, microprocessors would soon be producing more heat per square centimeter than the surface of the sun!”, he says. There are ultimately only so many transistors, so many cores that you can pack on to a single chip. This is where scientists are turning to solutions with using materials other than silicon and efforts are even ongoing to radically improve or entirely move away from the current CMOS (complimentary metal-oxide-semiconductor) based technology on which we're now operating.

Thermal material for faster computing

GE recently came up with a phase-change based prototype substrate can be applied to computer chips for higher heat dissipation

Google's clean power tower

Google's invests \$168 million in a solar power tower which will generate a large amount of clean solar energy

Tomorrow's Tech

We're talking Terahertz here

Factors limiting how 'fast' computers can get also include other problem occurring out of scaling down transistors to such levels. Have you noticed that processor frequency hasn't gone up for quite some time? Sure, you have hyper-threading and multiple cores, but why the ceiling on clock speed?

One of the reasons is that the transistors themselves need to get faster, but can't anymore. When we say that transistors need to become faster, we mean the rate at which they switch. As a thumb rule, the thinner the transistor gate, the higher is the electric field created (as is evinced in the working of a capacitor). The higher the strength of the electric field the faster the transistor would switch. But right now the gate isolator underneath the gate on a 45 nm process measures 0.9nm in thickness, which is just a little larger than a single silicon-dioxide molecule. Most believe it can't get smaller than this.

As Jonathan Kang, CPU Architect,

peculiar electronic properties Graphene intrinsically exhibits. Graphene is essentially a sheet of carbon just an atom thick (or thin). So thin that you can think of it as two dimensional! Graphene also allows for much higher rates of electron flow. Last year, IBM showcased Graphene transistors that were capable of switching at clock frequencies of 100 GHz. These transistors were produced using techniques similar to those used in producing silicon wafers, so commercial production is possible. Digital signals are still a problem for these transistors though, so for now, use in conventional computing is ruled out. "Because graphene is a zero bandgap semiconductor, meaning there is no energy difference between its conductive and nonconductive states, transistors made of graphene cannot be turned on and off. In contrast, silicon has a bandgap of one electron volt, making it good for processing discrete digital signals", Yu-Ming Lin, the lead researcher is reported to have stated. As work continues though, scientists are hopeful of encountering newer breakthroughs.

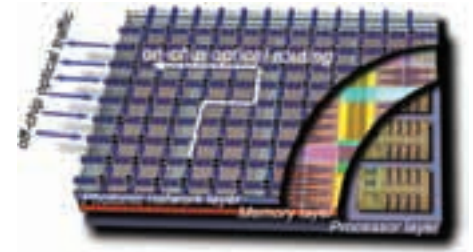
Recently, the same research group announced taking the cut of frequency of graphene transistors to 155 GHz. When work in this area was first published in 2008, researchers hoped that THz Graphene transistors could be achieved in an optimised graphene transistor with a gate length of 50 nanometers. The gate length of the latest ones were 40 nm. So graphene has been a little slow

to come through, but will likely make transistors bad-ass eventually. But what about the other slow pokes?

The inevitable bottleneck

When one microcomponent operates faster than the surrounding ecosystem, it will obviously not help overall computing become faster. Bottlenecks can

happen within the component itself or the surrounding components in the process chain. They can even happen because of the bus transport bandwidth. Take the processor; if it can spew out information at a certain number of cycles per second and your memory doesn't have the bandwidth to accept information at such a rate, there's a bottleneck. The



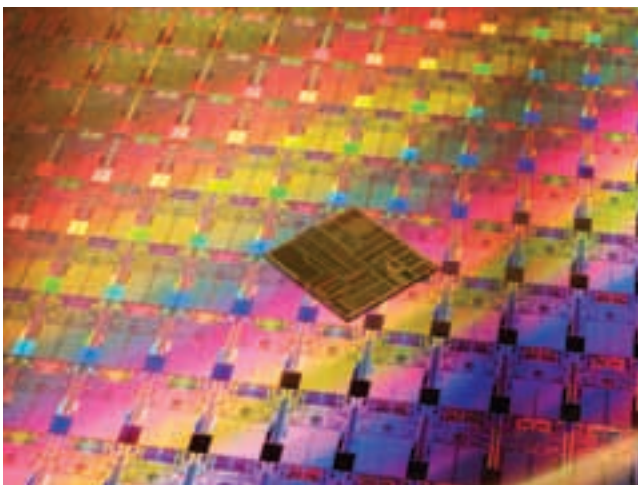
Top layer featuring photonics network

front side bus also comes into play here.

To understand bottlenecks, think of computing as a large congested metropolis. Building fly-overs in such a city only helps you get to your traffic jam faster. It won't help you get to your destination quicker. So far we've been talking about transistors and the roadblocks limiting their scaling. However, another issue has to do with the chip or IC containing these little transistors. The interconnects between these transistors are the limiting factor now. Architecturally band-aid solutions have been found for this problem but as computers traverse Teraflops, to Petaflops to even Exaflops of compute power, things will start to clogging. What is needed, is a faster and more efficient on and off chip connectivity option.

Let there be light

One of the most promising technologies that aims to remove on-chip bottlenecks in preparation for the Exaflop era is IBM's CMOS Silicon Nanophotonics technology. If IBM has its way, in the near future, chips will be communicating using light pulses instead of electrical charge. The premise is simple – if optics can replace copper over longer distances of communication maybe they can even become competitive over shorter and shorter distances. The ultimate goal of this project is to develop



The Penryn Wafer photographed with an original Intel Pentium processor die. The new processors incorporate 820 million transistors for each quad core chip

puts it on Quora.com, while explaining these difficulties, "The simple matter is that the easy scaling we've had in the past where every shrink in transistor size would also lead to faster transistors is over". Scientists are hence looking towards newer materials.

Graphene seems to be the most likely choice here. This is because of the

Space surveillance telescope

DARPA's new light sensitive telescope built for the US Air force can observe faint objects in deep space which were impossible to observe

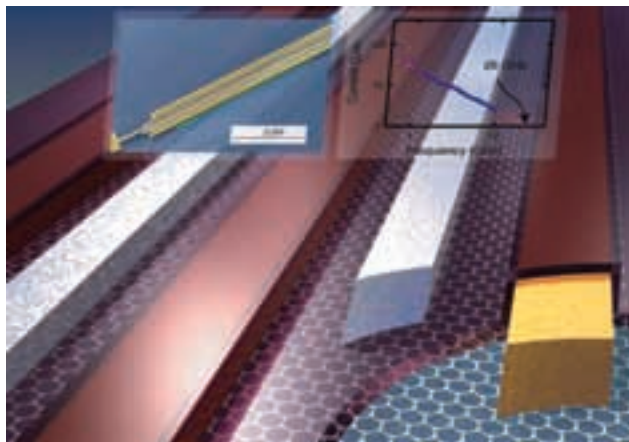
One ID for your web presence

US renews call for single online ID for its citizens to enable safe online presence and remove the need for multiple ID's

a technology for on-chip integration of ultra-compact nanophotonic circuits for manipulating the light signals, similar to the way electrical signals are manipulated in computer chips. According to IBM they are "developing nanoscale silicon photonics circuits to enable the integration of complete optical systems on a monolithic semiconductor chip that would eventually allow to overcome severe constraints of today's mostly copper I/O interconnects".

The technology is aimed at producing an exascale supercomputer which will be capable of performing one million trillion calculations in one second. Million trillion, though sounding like a fictional figure like a gazillion, is an actual unit of measure.

It's not hard to imagine this technology coming into the hands of consumers in a while. Chips based on this technology will have three layers. The first will be made up of the cores (multiple cores for supercomputers) and on top of which will be a memory layer for easier access to the cache. On top of the stack is the Photonic layer with many thousands of individual optical devices (modulators, detectors, switches) as well as analogue electrical circuits (amplifiers, drivers, latches, etc.). This layer will route data traffic both on and off the chip.



Graphene Transistor

Move everything closer

As we mentioned earlier on, apart from processors, memory and data storage constitute the other side of the computing chain. As things work today, especially at the data centre-level computers, data is shuttled between where it is stored to where it is processed at great real and notional costs viz. energy and time. Processors cache frequently used information close-by (volatile) but once processed, it is moved to a more permanent storage to be called upon when required.

HP has some interesting concepts brewing on this end. Parthasarathy Ranganathan, a researcher from HP is working on a different architectural

approach to merge memory storage and processing.

"We are entering an exciting era for systems design. In addition to continued advances in performance, next-generation designs are also addressing important challenges around power, sustainability, manageability, reliability, and scalability. At the same time, a confluence of emerging tech-

nologies (such as photonics, non-volatile storage and 3D stacking), and new workloads (around cloud computing, unstructured data, and virtualization) offer additional new opportunities and challenges. The confluence of these trends motivates a rethinking of system design -- motivated by holistic considerations and cross-cutting traditional design boundaries", said Ranganathan.

In a white paper published in IEEE CS, he has described the concept of using nanostores. "The key property of nanostores is the colocation of processors with nonvolatile storage, eliminating many intervening levels of the storage hierarchy. All data is stored in a single-level non-volatile memory datastore that replaces traditional disk and DRAM layers – disk use is relegated to archival backups", he says. The nanostore is based on a nanoscale technology called memristor - a device that can perform logic operations as well as store data. What would this mean to systems? "Our proposed new design, nanostores, have the potential for dramatic (10-100X) improvements in efficiency and present significant opportunities for future research", Partha informed us. Given a few assumptions HP expects in the future a node that groups nine nanostores, can provide one-half to one terabyte of non-volatile memory with teraflops of local compute co-located with the storage and about 256 Gbytes of aggregate datastore bandwidth. Indeed a bountiful future to look forward to. **4**



Silicon optical transceivers will have modulators, switches and detectors all cast the same CMOS die

worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

(MUST READS)

STEAMPUNK IRON MAN



Instead of the Arc reactor, if the Iron Man suit was powered by a coal fueled fire, this is what it would look like. Marvel at this awesome steam punk creation

<http://bit.ly/digit051>

STRANGEST LOCATIONS FOR DATACENTERS

Did you know some of the world's data centers are located in places like abandoned military bases, Spanish Chapels and even the south pole! This photo essay on ZDNet rounds up some of the most interesting and remote locations around the world housing and processing computer data

<http://zd.net/digit052>

SORTING ALGORITHMS AS DANCES

You may have seen several novel simulations of sorting algorithms but we guarantee you must not have seen something like this. They've taken folk dancers, choreographed the dances and overlayed the videos with various sorting algorithms. As dancers swap partners you get to see how the algorithm works.

<http://bit.ly/digit053>

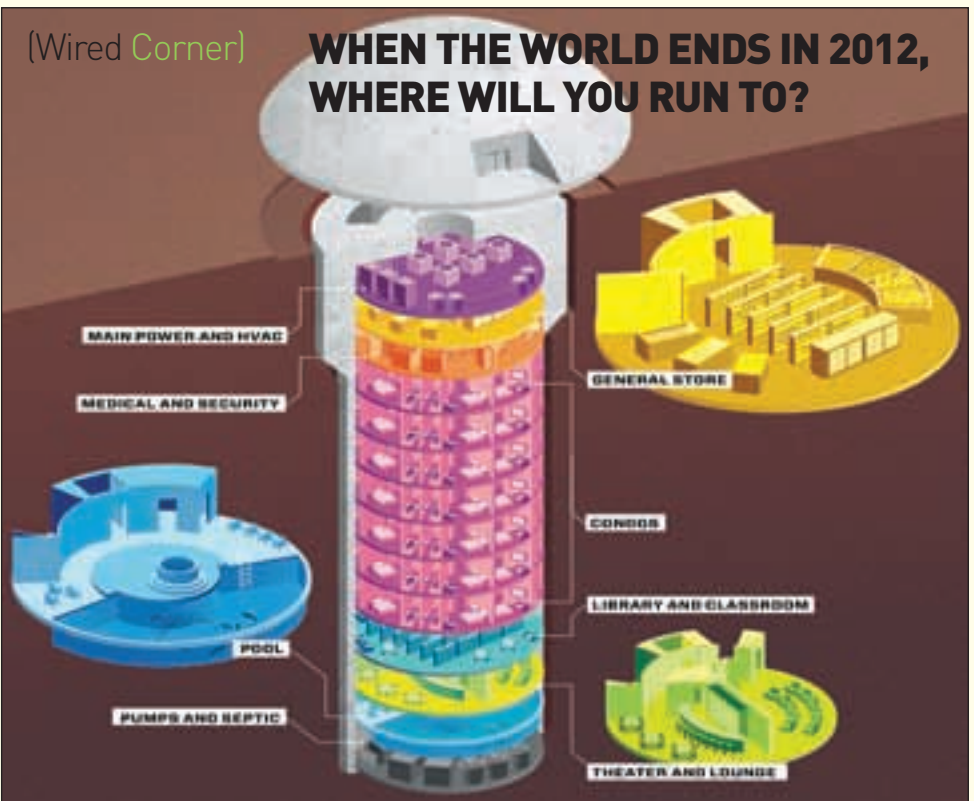
GOOGLE'S JOKE BECOMES REALITY

Remember Google's April fools prank? A video was posted showcasing a new feature for Gmail called Gmail Motion that let users interact with the service using gestures. Students from USC's Institute for Creative Technologies actually made a working prototype using a Kinect.

<http://bit.ly/digit053>

(Wired Corner)

WHEN THE WORLD ENDS IN 2012, WHERE WILL YOU RUN TO?



If software engineer Larry Hall's vision comes true, it could most likely be this state of the art bunker. The 54 year old bought a decommissioned Atlas F Missile Base in Kansas to construct the base and is already selling real estate within!

<http://bit.ly/wired001>



Find the future

A new alternate reality game by this name will bring players in contact with some of the many inspirational artifacts housed at the New York Public Library. Players get one night to write a book!

<http://bit.ly/wired111>



Do more with Firefox 4

This user-generated wired wiki lets you read, discuss and share the lowdown on features such as sync, native video, and tabs. Learn how you can maximise your favourite browser:

<http://bit.ly/wired113>



The real Android Army

The US Army wants every soldier to carry a smartphone to stay networked and they've chosen none other than the Android Operating system. For info on features, sensors and hardware:

<http://bit.ly/wired112>

100 GEEKY GIFTS!

Here's a list of 100 breathtaking, badass, and beautiful gifts that any geek would die for. The list is neatly categorised into subsections such as "on the go" etc. The whole expanse includes everything from padlocks to geeky cycles. <http://bit.ly/digit057>

THE SCIENCE OF GREAT MUSIC

Like or hate Rebecca Black?



Scientists are trying to understand and quantify what makes music expressive, and the results are contributing to a greater understanding of how the brain works. <http://nyti.ms/digit056>

MARRYING MICROSOFT NO GOOD FOR NOKIA

Despite Microsoft partnership, Nokia continues to loose ground is what the numbers are saying. It also announced that it intended to cut costs by nearly 20 percent over three years, a move that will most likely eliminate thousands of jobs. <http://nyti.ms/digit058>

LEARN FROM AMAZON'S EC2 OUTAGE

Recently a server outage caused sites like Quora, FourSquare to go offline. While most people are still recovering from the fact that Amazon's usually reliable and highly scalable EC2 platform failed, computing. <http://on.mash.to/digit059>

How to Buy the Best Tablet

Whether you opt for an Apple iPad, a BlackBerry PlayBook, or an Android device, like the Motorola Xoom, purchasing a quality tablet can be a daunting task. Here's what you need to know before you hit the store.



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When the first Apple iPad and the Fusion Garage JooJoo were released within days of each other in early 2010, the world got its first real taste of tablets—and, what some might say, is an excellent summation of the breadth of quality future tablets would offer. At the high end, the iPad, and now the iPad 2, is the benchmark tablet to beat, with top-notch, seamless design paired with a robust app store. The now-discontinued JooJoo was a clunker—it lacked internal storage, often crashed, and basically didn't have any apps, only some basic tools. In between these bookends lies the rest of the tablet field, with early Android tablets (anything running a version lower than Android 3.0) ranking closer to the JooJoo end of the spectrum and newer Android tablets like the Motorola Xoom and upcoming second-generation Samsung Galaxy Tabs taking aim at the iPad. Upon first glance, the upcoming RIM BlackBerry PlayBook also looks to be quite the competitor, with its own operating system and the ability to run some Android apps. So which of the plethora of deceptively similar-looking tablets is worth your sizable investment? Let's look at the key factors you need to consider:

FIRST OFF: DO YOU EVEN NEED A TABLET?

Simply put, tablets aren't really filling any true need right now—they are neither replacements for full-fledged computers nor smartphones. A tablet is a touch-screen media device that is actually most similar to a very advanced portable media player—or an MP3 player with a much larger screen. Yes, many of them have mobile service features, but currently none of them make phone calls via a traditional mobile provider. And while you can get work done on a tablet, you won't get a desktop-grade operating system, like you'll find on a PC.

OPERATING SYSTEM

First, just like with a computer, you must choose your allegiance. Apple's iOS is the mobile platform used by the iPad, as well as the iPhone and iPod touch. By now, you're probably familiar with iOS even if you don't own an iPhone, seeing as the device is as ubiquitous in public as it is in television and movies. On the iPad and the iPad 2, iOS works very similarly to the way it does on the iPhone, with certain tweaks made here and there to take advantage of the tablet's larger 9.7-inch screen. The built-in iPod app on the iPad, for instance, has an extra side menu for additional navigation options that wouldn't fit on a 3.5-inch screen.

- By Tim Gideon



Google's mobile OS, Android, is a different story. There are several iterations of Android, but only one—Android 3.0, a.k.a. Honeycomb—is designed specifically for tablets. Right now, only one tablet offers Honeycomb—the Motorola Xoom—and that makes it the iPad's most viable contender, for now. It is a showcase for Android 3.0, which features an improved, more visual multitasking bar than iOS, as well as superior e-mail notifications. Unfortunately, these two particular strengths, though legitimate, are not strong enough to topple Apple's iOS when you look at the bigger picture. The home-screen for Honeycomb, for example, can get easily cluttered because there are so many different ways to organize, rather than just putting things in tidy folders as you can with iOS. The one you choose will largely depend on your personal preference, so if you can try before you buy, you should.

APPS

Android lacks a strong selection of apps. Even with the newly announced Amazon App Store, the number of Honeycomb

BO.IT MAKING WAVES

A new page sharing service called <http://bo.it> lets you create an editable copy of any webpage on its

servers. You can then change the text, edit and delete images and text and change links and share the page on Twitter or Facebook. Check it out:

<http://tcn.ch/digit055>

WHERE ARE THE WOMEN IN WIKIPEDIA?

As it turns out less than 15 percent of Wikipedia's contributors are women. Read this discussion that tries to find out if something about Wikipedia's format and purpose attracts more male contributors unlike sites like Flickr and Yelp that do not appear to have this gender gap. Are there ways to alter this gap?

<http://nyti.ms/digit060>

YOUTUBE INSTANT CREATOR DOES IT AGAIN

After the phenomenal attention he got for YouTube instant, Feross Aboukhadijeh has come up with a new mash up called Instant.fm. It lets you drag a playlist from various sources and the service queues up YouTube videos of the songs in the list, playing them in the playlist's order.

<http://bit.ly/id4gFV>

tablet-friendly apps that work well is very low. We could linger on this section, but the bottom line is simple: if you want lots of apps for your tablet, right now, nothing out there beats the iPad. It sounds simple, but the variation in size (and manufacturers) complicates things greatly. It remains to be seen what kind of options will exist for the BlackBerry PlayBook. Eventually, one hopes, the other app stores will catch up to Apple, but if a wide range of compelling apps is your main priority, Apple is currently your best bet.

DESIGN AND SIZE

First things first: When you hear the term "10-inch tablet," this typically refers to the size of the screen, measured diagonally, and not the size of the tablet itself. Apple continues to offer the iPad in one size only (9.7-inch screen). The Xoom comes in one screen size too (10.1 inches), but Samsung just announced new Galaxy Tab models in multiple sizes (8.9- and 10.1-inches) in addition to the current 7-inch Tab. In other words, you have plenty of options, but the higher quality tablets thus far have veered towards the larger end of the scale since they offer a better finger-centric, touch screen experience. At around 1.5 pounds (in the case of the iPad 2) they're not as light, as say, your cell phone. After you hold one on the subway for ten minutes, your hand will get tired. Setting it flat in your lap, rather propped up on a stand, is also a little awkward. As for storage, the more the better—those apps, when combined with a typical music, video, and photo library, can take up a lot of space. Right now storage tops out at 64GB of flash-based memory, with many

of the quality tablets we've seen available in 16, 32, and 64GB varieties. Larger capacity models can get as expensive as full-featured laptops, especially when you factor in cellular service plans.

WI-FI-ONLY VS. CELLULAR MODELS

Most tablets come in a Wi-Fi-only model or with the option to pay by the month for 3G (or eventually, 4G) always-on cellular service from a provider like AT&T, Sprint, T-Mobile, or Verizon Wireless. If you want to use your tablet to get online anywhere, you should opt for a model with a cell radio. Another way to get your tablet online: Use your 3G or 4G phone as a Wi-Fi hotspot for your tablet—this won't work with every phone/tablet combo, so you should check with the carriers before you buy in.

CAMERAS & VIDEO CHATTING

With the release of the iPad 2, Apple caught up rather quickly to its tablet competition and added front- and rear-facing cameras for stills and video. The Xoom has a higher quality rear-facing



camera than the iPad's lackluster offering. The inclusion of front-facing cameras means tablets offer video chat features—but not all video chat apps are created equal. Google Talk for Honeycomb, which comes preloaded on the Xoom, is a top-notch app; simple to use, and it operates via Google accounts. You can chat with

anyone who has a Google account. However, not all Android tablets are created equal—be wary of any tablets that lack access to the Android Market. It's also worth pointing out that any Android tablet lacking Honeycomb, like the Dell Streak 7, is not running an OS intended for a tablet, and thus, its apps often offer a weak user experience. The Streak 7 utilizes inferior apps for chatting and cannot utilize the Honeycomb version of Google Talk. Apple's FaceTime works similarly well, but is limited to certain Apple products, making it far less versatile than Google Talk.

PRICE

Like with most gadgetry, you get what you pay for, and tablets are no exception. If you spend anything less than \$500-\$600 (which seems to be the magic entry-range for Wi-Fi-only models like the iPad 2 and the Motorola Xoom), don't say we didn't warn you. The CherryPal Cherry Pad is a fine example of what \$188 will get you in the tablet world—not a lot, including a low-quality screen and a serious lack of features. As for 3G (and 4G) enabled tablets, the pricing varies widely depending on manufacturer, capacity, and plan, but expect to pay at least about \$20 per month on top of a higher up front fee—the lowest iPad 2 3G tablet price is \$629 for 16GB, for instance. Finally, before you buy, if you can, head to your local electronics store to get hands-on time with some different tablets, so you can see which feels and works the best for you. And for the latest lab-tested tablet reviews, hit our Tablet Product Guide. For more: <http://bit.ly/pcmagl>



One company and thier love for the guitar. In this photo essay you get to see first hand

the inner workings of the Santa Cruz Guitar company as they set out to hand craft some of the most loved guitars around. The photos are a visual delight to watch.

<http://bit.ly/eCtNfU>

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With our new World View section, we're trying to expose you to more international stories and culture.

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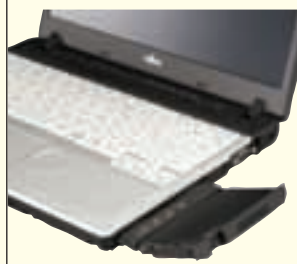
(PRODUCT LAUNCHES)

SONY NEX-C3



Judging by leaked images, the NEX-C3 may soon be hitting the scene packing in the same 16.2 megapixel image sensor used in the Sony Alpha A55 DSLR, as well as HD video capture and the new flash. The camera may sell for around \$500, with lens at launch.

FUJITSU LIFEBOOK S761/C



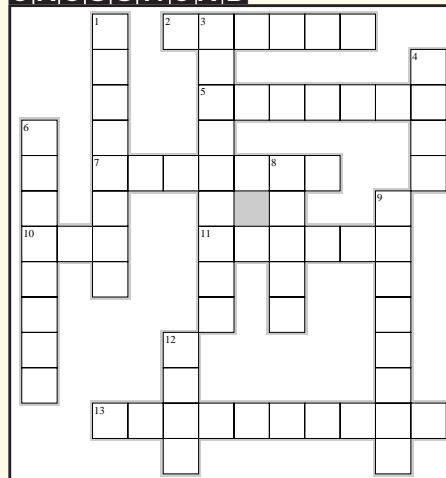
Though not very nice to look at, the latest model in Fujitsu's LifeBook series notebooks, has a pretty unique feature – an integrated pico projector instead of the optical drive. It also packs in a Core i5-2520M CPU, 1GB of RAM, 160GB of storage, for a price of \$2,675

RAZER HYDRA



Razer comes out with the Hydra controller that brings motion gaming to the PC. Primarily piggy-backing on the launch of Portal 2, the controller also comes with support for 125 other games. The device is set to be priced at \$139.99 with the Portal 2 bundle.

CROSSWORD



ACROSS

2. What is Star Networks' HD offering called?
5. One million trillion calculations a second
7. Famous web comic by Matthew Inman
10. GTX 590 and HD6990 have how many GPUs
11. Mass Effect 2 is based on what game engine?
13. A semiconductor device used as a switch

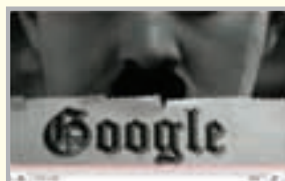
DOWN

1. First DTH provider in India Offering 3D HD service?
3. Steam based sub-genre of science fiction
4. Experimental protocol that could help reduce latency
6. Intel's new netbook and tablet platform?
8. Touted to be the world's most powerful smartphone by Motorola
9. Watch your TV anywhere with this device10. Motorola Droid uses this display
12. Nissan's 100% electric car

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Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these playing on your screen



<http://bit.ly/eyV9nu>

Duration: 2 min 08 sec

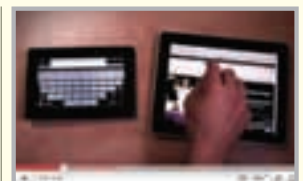
The Google Doodle team stars in an homage to the silent film era's greatest star's 122nd birthday.



<http://bit.ly/e9Ga1k>

Duration: 2min 58 sec

From the Motorola break through to the first text message and colour screen. Watch it all in cutting edge 3D projection



<http://bit.ly/f10kBY>

Duration: 3 min 16 sec

Video demonstration comparing BlackBerry PlayBook and iPad in terms of Flash support and HTML5

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Drool maal

Gadgets to die for, or kill for, depending on the way you look at it!

Vishal Mathur

vishal.mathur@thinkdigit.com

As we headed into the year 2010, the general opinion was that netbooks would rule the portable computer market, thanks to their affordable price and the expected increase in power and performance. What actually happened was what happens to many a stubborn army, resting too much on their laurels sees them vanquished in the end. Netbook makers seemed to be arrogant, and didn't really improve on performance or features, and as a result, they were flanked and outclassed – although the war rages on, the battle of the day was lost?

whose most destructive weapon was its OS that was designed for tablets from the ground up, the Galaxy tab had to struggle a bit with a more modest weapon – Android 2.2 (Froyo) OS – which was built for mobile phones.

Another aspect of armoury that was very different was the fact that the Apple iPad had a 10.1-inch screen, whilst the Samsung Galaxy Tab had a smaller 7-inch screen. Whilst Apple boasted of capturing larger screen area, Samsung touted the more manoeuvrable form factor of its device.

Relationships broke down, and the tablet army was forever plunged into a debate of whether a 10-inch screen is better than a 7-inch one – tempers still flare easily to this day.

Windows Phone 7

Is it any competition to Android, or not? Flip over to the article and find out...



Apple's iPad 2

2011:

The year of the tablet?

The rise of the tablets has happened at breakneck speed. Read on to know about what may happen

HEAVY ARTILLERY**The Apple iPad**

The launch of the Apple iPad (in April, 2010) took the netbook world by surprise, and inevitably, a slew of Apple-me-toos slid into the market. The tablet is a concept that has been around since the 1960s, however, it took Apple to generate excitement about the category and post impressive sales figures. Two things happened; first, there was a hole the size of China that opened up, splitting the hapless army of netbooks and laptops in twain – a completely new genre of gadgets caught our fancy. Second, the me-toos attacked in full force, and rode into that gap, virtually unopposed.

FIGHTING IN THE RANKS**My screen's bigger than yours!**

Samsung was the most aggressive attacker, led by the now famous general, the Galaxy Tab. Ill equipped when compared to Apple's one-man-army,

THE CLONE WARS**Borg vs. Borg**

Manufacturers attempted to use their choice of operating system as a means of differentiating their tablet from their rival's. What started out as a mere military action between Apple's iOS and Android – courtesy the iPad vs. Galaxy Tab – quickly scaled to a full blown war with everyone using the same weapon to try and annihilate the competition. It soon became a race to be the first to offer the latest Android version on a tablet. The fact that Android has since seen major updates from 2.2 (Froyo) to 2.3 (Ginger-

bread, in December 2010) and now 3.0 (Honeycomb, February 2011), and this did not help the early adopters much. Many a civilian casualty were witnessed.

The problem was, as we said earlier, that Android was never really built



The HP TouchPad

50 Tech-enabled Travel

We're always on the go, and always-on, but are we really making the best of tech when we travel?

with a tablet interface and hardware in mind. At best, it was a rather well-done mod. Only with Gingerbread just a few months ago did we see the first



HTC Flyer

Android version built for tablets.

With Android being the weapon of choice for all but Apple, a stalemate developed.

Of course, a few upgraded their weapon by modding the UI to add some bling on to an otherwise

52 Travel for Tech

If you're a geek looking for places to visit, we may have some answers for you

Feature

well-known interface, just to give the appearance of being different.

Since only the superpowers could afford such R&D, smaller players were stuck fighting a cold war – everyone bought their nukes from the same country that Apple made their iPad in, but with inferior hardware and a not ideal OS, everyone pretty much ended-up with duds that cost a lot but delivered a puff of smoke instead of the mushroom clouds we so wanted to see. Our own report of the Great Tablet War of January 2010 saw many brands that had identical devices with just their own stickers pasted on top!

With everyone and their uncle becoming a tablet-powered-brand, the cold war turned into an economic war of sorts. Prices fell – the Galaxy Tab launched at about ₹36,000, but can be bought for about ₹25,000 today. Even more models were released than ever before, and we laughed all the way to the bank – to withdraw a fistful of cash to blow up on (sometimes useless) tablets of course.

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Angry Symbian?

After iOS, Android and WebOS, Angry Birds Rio now lands on the Nokia Ovi Store

HTML5 Bing!

Microsoft begins rollout of Bing's HTML5 enhanced search interface

Apple grows bigger

Analysts suggest that Apple will hit 1 trillion dollar market cap in the next three year

Feature

I'M OUT OF AMMO SARGE!

Where are the apps?

Everyone was so busy peddling their weapons that they forgot to spend any time looking for the right ammo to use! At the time, a majority of the apps available for Android were designed for tiny screens, and with manufacturers squeezing out tablets in all shapes and screen sizes, there was just chaos.

Ammo (Apps) designed for smartphones were of no use on the higher calibre tablets. Porting apps to almost double the screen size took time, and we ended up with apps that backfired often, throwing up some rather ugly rendering issues. Thankfully, these days only the worst apps ever show any signs of those wretched days.

CHARGE OF THE DROID BRIGADE

CES 2011 and MWC

As usual, 2011 began with a bang. CES is the place to be early in the year, and

we all got glimpses of what to expect. In fact, just over a month later, at Mobile World Congress (MWC), held in Barcelona, BlackBerry, HTC, Lenovo, HP, Acer, Asus, Toshiba, LG and Samsung showcased their (cough!) iPad killers.

2011: A Tablet Odyssey

The iPad sequel

Propaganda is the way to win a war without firing a shot, and no one does it better than Apple. A leak here and a sneak peek there and the entire geek world waits in bated breath for the iPad 2. Once the news got out that it was expected, we all pretty much forgot the other launches from various brands.

Steve Jobs sports his battle attire – blue jeans and a black turtleneck – and carpet bombs the audience into submission with his words and the iPad 2. Of

course, the fanboys (who have been banned from Eden for being addicted to the forbidden fruit) claim world domination, whilst the rest choose paradise over Apple, claiming it's just a "minor update".

DIE HARD!

The hardware improves

Over the course of 2010, it became clear that light arms had about 600Mhz of processing power, which managed decent screen resolutions. In contrast, the big guns had a Navarone

	Apple iPad	Apple iPad 2
Display	9.7-inch	9.7-inch
Resolution	1024 x 768	1GHz dual-core Apple A5
Processor	1GHz Apple A4	8,499
Storage	16GB / 32GB / 64GB	16GB / 32GB / 64GB
Front camera	N.A.	VGA
Rear camera	N.A.	720p video
WiFi	802.11a/b/g/n	802.11a/b/g/n
Bluetooth	2.1 + EDR	2.1 + EDR
HDMI out	N.A.	Yes
FaceTime	No	Yes
Thickness	13.4mm	8.8mm



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iOS update

Apple releases iOS 4.3.2 update to solve 3G connectivity problems with iPhone 4

3 billion!

Google claims that more than 3 billion apps have been installed on Android globally

White iPhone?

Apple confirms that the long awaited white iPhone 4 will arrive this spring

sized 1GHz processor, much more RAM, a better screen resolution and the ability to playback HD videos.

Actually, today, almost every tablet claims to be able to record 720p HD videos and playback HD videos without any stutter. We're headed into another stalemate with hardware becoming standard across the board again. Apps sell tablets, not UIs and hardware.

A CIVIL WAR

Apps maketh the tablet

We're used to complaining about the way Apple manhandles its developers, and has rigid quality checks before allowing an app to be published on the Apple Store. We've also praised Android and its adopters for welcoming with open arms any app submissions. BlackBerry and Symbian are following suite too. Although app numbers on the other stores may have jumped significantly, Apple is not too worried, thanks to the fact that their apps all work flawlessly.

FUTURE WEAPONS

What will be different?

Currently, there are five different operating systems at play in the tablet ecosystem. The OS are – Apple iOS; Google Android; RIM QNX Playbook OS; HP WebOS; Microsoft Windows 7

While Apple has tasted success immediately in the tablet market, Android has gotten off to a steady start as well, albeit helped by the sheer variety of the products based on Android, compared to just one from Apple. However, Android still shows some rough edges. This is what we think will happen in 2011.

- Android's "made for the tablet" 3.0 version will take tablets into a completely different league altogether. The interface tweaks, media playback capabilities, support for faster hardware and the clamp-

down on the ability of the hardware manufacturers to "over-customize" it will mean that the OS from Google's stable will be more streamlined (and optimised) than ever before. Will that mean a better experience for the end user? Maybe, maybe not. Too much customisation add features and enhances usability of the entire Android package, but Google's attempt to iron out the un-optimized modifications may result in hardware manufacturers not bothering at all.

- Even though Android 3.0 has been received with a lot of oohs and aahs (from the videos we have seen), Google knows that it needs to raise the bar higher. Apparently, Google is working on a tablet version of the Chrome OS. Expect it before the end of the year.
- RIM's Playbook tablet is aimed as much at the end consumer as it is targeted at the corporates and business users. The attempt is to make the entire office experience available to the user on an even bigger screen, with the fun capabilities (media playback prowess and even games) to boot. A complete tablet? Not really, but will be the tablet for the business user, to complement the BlackBerry smartphone. QNX is the OS installed in this tablet. RIM is attempting to handle the app issue by making this compatible with Android apps. If that doesn't work, QNX will need to have Plan B to fall back on.
- HP is using the WebOS to

challenge Android. However, this is the same OS that could not save Palm's smartphone business. Hard to imagine it successfully challenging Android and iOS, straightaway. However, HP realises the importance of this, and it is the one shot that'll make or break their tablet. HP has trashed a lot of WebOS updates, the way we trash a sheet full of rough calculations or notes. The work on improving the webOS continues with no compromises, and for the sake of competition, we hope it works.

- Microsoft's tablet plans. This is one riddle almost no one has been able to figure out. While some Windows 7 based tablets have been released, powered by Intel's Atom processor, it is essentially a desktop OS behaving like a desktop OS, inside a tablet. Compared to the slickness of the rivals, this one is a lumbering giant. Do not expect any dedicated OS for the tablet in 2011. However, what surprises us is the fact that Microsoft hasn't thought about putting Windows Phone 7 OS on tablets. It worked for Android, after all. Expect this to dawn upon them, sooner or later.
- Apple iPad 3? Isn't that the inevitable question! Not likely, we say. Apple will let the iPad 2 get all the accolades till at least the beginning of next year. And that will complete the one-year life cycle of the iPad 2, anyway. **td**



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Cisco flips the switch on Flip

Cisco announced the shut down of its Flip camcorder division which it bought from Pure Digital two years ago at 590 million

Gaming tablets: The next step

GameStop, a leading video games retailer intends to come out with a gaming centric tablet with partners or on its own

SIM2 C3X LUMIS 3D Solo

Italian manufacturer SIM 2 is world renowned for producing high-end home projectors. C3X LUMIS 3D Solo is the latest addition to the SIM2 stable. Designed by industrial designer Giorgio Revoldini the C3X has looks to kill for, it's available in a glass surface with options for both white and black. C3X exploits SIM2s award winning PureMotion 3D active technology, it houses four pairs of XPAND 3D powered active glasses C3X gives crystal clear 3D HD image resolutions. Add this to your wishlist for only \$50,000.



B&W Zeppelin Air

Bowers & Wilkins has been producing high-end audio speakers for quite a while now. Taking this legacy further, they've come out with Zeppelin Air. This might be the best looking and best sounding iPod dock with a not so expensive rate tag. Featuring three septate amps and a 125mm subwoofer, Zeppelin deftly handles a variety of music genres. For airing music Zeppelin uses the Apple Airplay technology which gives you the freedom to stream music from any Apple device. For a price of \$600 this wouldn't burn a whole in your pocket.

We featured the Fat-man iTube 452 in May 2008 which was an amp and a dock for the iPod.



Intel making profit!

World's largest chipmaker's quarterly profits have jumped by 29%

Apple sues Samsung

Blaming for imitating the iPad in its Galaxy range of devices Apple is suing rival Samsung.

Drool maal

Altec Lansing inMotion MIX iMT800

Who doesn't like partying with friends while playing loud music? InMotion by Altec Lansing lets you jazz up your party even further as everyone can play the DJ. It offers a 30 pin dock connector along with two 3.5mm jacks so everyone can play and enjoy their music. Designed as a boom box for easy portability the inMotion has a variety of equalizing options and also features FM tuner. To keep your party pumping with bass this boom box uses Xdb technology doubled with a 5.25 inch side firing sub-woofer. Make sure you have this on your party inventory list.



SOEE Soundesign

For those who like to have that extra bling for their high-fi speakers here's some good news. Guys at SOEE Soundesign have created a range of omnidirectional speakers which come in a variety of custom design colours and panels. On offer are the Drop's and Up's (yeah that's what the speakers are called) these speakers are capable of delivering rich sound in 360-degrees. Top of the line model is encrusted with Sworski crystals and sells for a mere \$ 40,850

TDK XsiV S80 were droolworthy back in May 2003, they too had drop dead gorgeous looks

Touch Tunes Virtuo

The new age jukebox has arrived! If you happen to absolutely adore the iPad then the Touch Tunes Virtuo jukebox is for you. Featuring a similar design and interface the Virtuo is meant for audiophiles who want on-demand music. Virtuo is designed by Frog Design studios, it features an array of LED lights on top of its touch screen and a built in-camera to capture your fun filled evenings. Ambilight adds to its wow appeal and so does the 3D contextual web music browsing.

Back in the day Sony CMT-L7 HD with 300 CD storage capacity was the jukebox to watch out for. Featured in July 2003



Robots at work

Fukushima nuclear reactor is now being explored by bots as the radiation levels are too high for humans

How to be a YouTube celebrity?

Always fancied having a trending channel on YouTube? Well here's your chance to learn the trade secrets. Watch the video here <http://bbc.in/g3T17c>

WINDOWS PHONE 7

the **GOOD** the **BAD** and the **UNKNOWN**

The smartphone battleground has seen a new entrant with Microsoft promising to put up a brave fight with Windows Phone 7. Is it time for you to switch camps?

Soham Raninga

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Microsoft's latest smartphone platform – Windows Phone 7 has been in the news for its fresh, ground-up approach, garnering a fairly positive initial feedback from most analysts across the globe. Windows Phone 7 is definitely good news for the touch screen smartphone market. There's a significant third choice along with the popular Apple iOS and the rapidly growing Android platform. Coming from the Microsoft stable, Windows Phone 7 certainly does enjoy a certain level of trust and familiarity in the Indian market.

As a standalone smartphone OS, Windows Phone 7 seems impressive and is miles ahead of the earlier Windows Mobile platform. But, when compared to the Android and the Apple iOS, WP7 (in its current form) has its fair share of limitations, issues and restrictions. Given the fact that the WP7 is comparatively a fairly young platform

holding a “work-in-progress” placard, one can ignore some of the obvious omissions and niggles that are expected to get ironed out via updates. It is the overall philosophy and approach that one needs to keep in mind to evaluate it against the competing smartphone platforms.

THE GOOD

Not exactly an “app centric” approach

Unlike the Android and iOS platforms, Windows Phone 7 keeps away from the app centric interface for its home screen. You get a “tiled” interface. These tiles are a

lot larger on the screen; this allows for easier operation owing to the larger surface area of each tile. Another significant advantage is that each tile is “live” and displays latest information and updates without having to enter the application. For example, one glance on the home screen will update you about your latest mailbox activity, Facebook updates and last accessed office documents. Microsoft believes that the tiled interface ensures that the user

spends less time on the phone and gets the information quicker.

Surely, we found the tiled interface a lot more convenient and practical. While the home screen is not laced with apps, one does ultimately deal with them once you get into the main menu that lists all the apps. You can create a tile for any app and bring it to the home screen.

WP7 groups related content and information under “Hubs”. Content is segregated across six hubs – People, Music,

The “Hubs” display images of the people with whom you interact regularly, a very fresh feel compared to the icon laden interface of the iPhone and Android platforms



Pictures, Games, Marketplace and Office. The “people” hub clubs your phone contact list, Facebook friends list and email contacts together. In the same fashion, relevant content is grouped across the six hubs in an easy to find and use manner.

Fluidity that rivals the iOS

When it comes to the touchscreen response and behaviour, WP7 is at least as good as the iOS and certainly better

Google back on track

With Larry Page back as its boss, Google has reported a sharp rise in its first quarter earnings

Geek life

NOKIA EMBRACING WINDOWS PHONE 7

The announcement of Nokia adopting the WP7 does seem like a win-win situation for both Nokia and Microsoft. Nokia was clearly struggling with symbian not being able to stand against the likes of Apple iOS and the Android army. Microsoft too isn't traditionally a hardware company and would really need strong support from a quality handset manufacturer to deliver quality handsets based on the WP7 platform. But, the success of this recipe would largely depend on how

quickly and efficiently both these giants roll out products in the market. The pricing of the handsets and the app support will be vital for their success. As a consumer, if you are a Nokia



fan, the WP7 smartphones will surely appeal to you more than the symbian based touch-screen phones in the

market. One can expect tight integration of the hardware and software on the Nokia WP7 devices, ensuring fewer performance issues and a fluid experience.

Currently there aren't any WP7 based Nokia handsets in the market, but there is a talk about the first couple of Nokia WP7 devices, the W7 and W8 launching soon in the market. A lot will depend on how these initial devices perform amongst the intense competition.

than the Andorid (2.2) platform. The response is immediate, the transitions and interactions are as fluid as they get and dare we say, in some areas, they are evidently superior to the iOS. The onscreen keypad is the best in business; we registered minimal typing errors on the WP7 keyboard and the auto-correction feature implementation is simply superb. Using the device for a couple of hours and you get the drift, Microsoft has opted for a clean, simple and straightforward approach, it smells a lot like Apple but has a Microsoft flavour – a nice combination for sure.

High on gaming and music

Media experience on WP7 is quite a treat. Anyone familiar with the

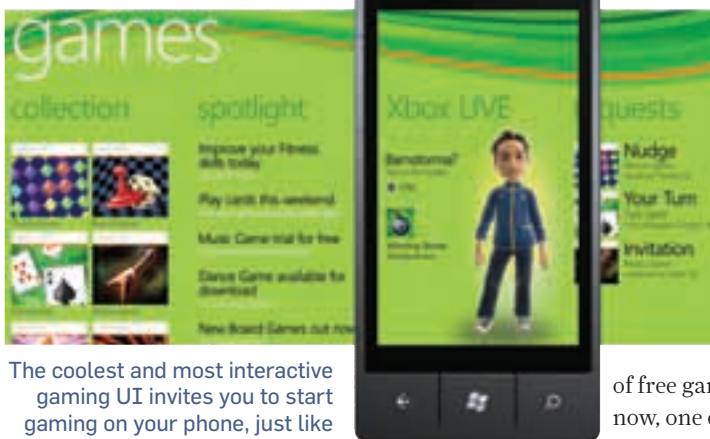
Microsoft Zune player interface will feel right at home. You essentially get a Zune HD player when you buy a WP7 handset, much like in the case of the iPhone that doubles-up as an iPod touch. Overall, the media experience is better on the WP7 devices compared to the Android platform, media is managed centrally and you get the full fledged UI of a popular (and hugely underrated) media player platform that is missing on Android.

It's no surprise that WP7 ships with all the goodness of the Xbox platform, Xbox live on the WP7 is great news for mobile gamers. And, if you are an Xbox user, you surely hit a jackpot with WP7. The gaming experience is "fulfilling" and very detailed, similar to gaming on a

dedicated console. Xbox live

users can simply login to import their credentials along with their avatar. Each game available on the Xbox live platform has a demo available for free download. While the list

of free games is limited now, one can expect things to change soon.



The coolest and most interactive gaming UI invites you to start gaming on your phone, just like you do on a console

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Most wired economy!

In a study by World economic forum, Sweden and Singapore top the digital competitiveness of nations index

Playstation network down

Millions of players are out of the Playstation network as it suffered its own fail whale for more than 20 hours

OPTIONS FOR WP7 DEVICES TODAY

HTC, Samsung and LG did jump on to the WP7 bandwagon almost as soon as WP7 was announced. Dell joined the party lately with their premium Dell Venue Pro offering. So, if you are betting big on the WP7 platform and are itching to spend some of your bank balance on a shiny new WP7 phone, here are your options in the Indian market currently.

1) HTC HD7

Buy for: Big, 4.3-inch screen, good build quality, capable hardware

Watch for: Clunky and heavy handset, camera quality isn't great

Pricing: ₹27,000

2) Dell Venue Pro

Buy for: Slide-out physical QWERTY keypad, 4.1-inch high resolution screen,

Watch for: poor

camera performance, heavy device

Pricing: ₹28,500

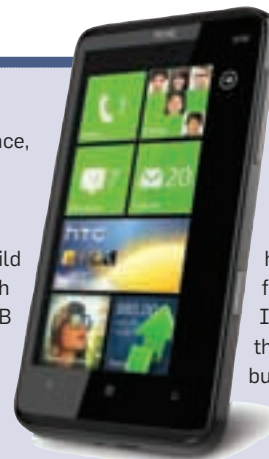
3) HTC Mozart 7

Buy for: Great build quality, xenon flash

Watch for: only 8GB storage

Pricing: ₹25,500

The Samsung Omnia 7 and LG Optimus 7



were seen in the grey market, but their official presence in the market is doubtful and hence you might find some eBay India sellers offering these handsets but they will not be backed by official warranty.

Takes work seriously

The office integration and implementation on Windows Phone 7 is unsurprisingly brilliant. You'd obviously expect WP7 to give you the best possible office experience and so it does. Right from the ability to view all common office documents to editing them and managing them, the process is much better compared to any smartphone platform today. The editing options are pretty basic though, you can only change font colors, format them and highlight text.

The "OneNote", note taking application is quite a gem, it lets you attach photos or record audio clips along with the notes and they can be synced to your Windows Live account so you can access them from anywhere through the cloud service.

Browsing is another area where WP7 scores very high, while the browser itself is not blazing fast, it is pretty stable and behaves well across all applications. Be it pinch and zoom, font rendering and page alignment, script rendering and flash performance. The experience is largely smooth and glitch-free.



device to make it look, feel and function differently, WP7 will make you feel very cramped. The interface is more or less fixed and unlike the Google Android OS, you cannot customise WP7 to make it sing to your tunes. Heck! You can't even add a custom ringtone! Microsoft being Microsoft, gives you very little headroom to tweak the OS as per your requirements, unless there is an update from Redmond, you are more or less stuck with the same interface with very few settings that can be accessed to customise the OS. In this Android age; micromanagement of apps, tweaking the settings for performance boost, being able to "kill" a task and adding a custom app to manage vital statistics of your device is perhaps not too much to ask for. But, for Micro-

The office interface that you are so used to on your PC platform, no reason to complain here.



soft, it's my way or the highway for now.

App Support

Weak app support is WP7's Achilles Heel today; the app ecosystem (Windows Phone7 Marketplace) is nowhere close to Android Market and the Apple App store. One would assume that, Microsoft with all their muscle and clout would be able to pull-in developers to churn out apps and flood the market place. But, the

restrictions of a closed platform coupled with stringent requirements and guidelines for app developers is pulling WP7 down in terms of the sheer number of apps, quality of apps and also the overall developer interest. The fact is, if ever Microsoft manages to match the competition in terms of variety and availability of apps, it is not happening any time soon. Also, unlike Android, one cannot expect a lot of free apps featuring on the WP7 Market Place. So if you are one of those who lives and breathes apps, WP7 surely will not catch your fancy for now.

Microsoft Centric

For obvious reasons, WP7 will push Microsoft services above all others and that isn't necessarily a bad thing. But, if you associate the word "google" with search, mail and maps, the support on WP7 for these Google services isn't exactly stellar. The default universal search on WP7 is Microsoft Bing, the default browser is Internet Explorer and the default GPS application is tied to Bing Maps. Let's take Bing maps for example, it is nowhere close to Google Maps (which is getting smarter with every update) and you cannot install Google Maps on a WP7 device as of now. Even if one does see the arrival of Google Maps on the WP7, it probably will be a crippled and very basic version.

Even when it comes to device management Windows Phone 7 device is locked to the Zune software, which acts as a door keeper for most of the interaction. So, when you are buying into WP7 as a platform, you are essentially agreeing to live by the Microsoft

THE BAD

Not for customisation

If you are the experimental kind, always trying to tweak and customise your

BlackBerry Android?

RIM has indicated that it will introduce support for Android Apps on its latest tablet, the Blackberry playbook

Google's road map

Google prefers "Boost" over "Tags" as its local business advertisement product.

Geek life



The market place deserves a cleaner interface, the fact that there isn't much to show becomes evident soon

software and depend on their services which aren't the best in all departments.

THE UNKNOWN


Will it keep pace? Only for deep pockets? How serious is Microsoft about WP7?

Sure, Windows Phone 7 is slick and a far more improved product compared

to the earlier Windows Mobile series. But, will it keep pace with the rest of the platforms to ensure that it matches and even surpasses them from time to time? Is Microsoft holding enough firepower in its arsenal to be able to stand up against a proposed superior next version of Android and iOS? The questions on Microsoft's commitment and ability to see it through, and get neck deep into the Smartphone war is yet to be answered. There have been

a couple of updates to the WP7 OS so far, and while the last one- the "Mango update" claims a lot, these updates have essentially been corrections and inclusions of some very obvious missing features like the ability to copy-paste or performance improvements in general.

Another major factor, that is probably been watched closely is the spread of WP7 devices. So far, most of these devices have been released for the high-end segment, sporting a pricetag of ₹25,000 and upwards. Is Microsoft reserving the OS for the premium devices, will be see lighter versions on cheaper smartphones. Will the Nokia-Microsoft marriage bring-in more devices scattered over various price brackets?

All said and done, the WP7 is surely an interesting proposition that will be closely watched by one and all. If you are keen on the WP7 platform, we suggest you wait for the arrival of more devices and some significant updates to the platform before you take that plunge. 

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Essential Travel Checklist

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A-GPS

This is an abbreviation for assisted GPS and is used primarily in mobile phones to determine location with assistance from the network

It really doesn't matter where you're heading to, but getting your money's worth. Whether your destination is *God's own country*, or the *Land of the Rising Sun*, how could you be sure you're not taken for a *ride* by the taxi driver? How would you ever bargain as a true *desi* when all you know about China is fried rice and Jackie Chan?



Travel with Technology

Nash David

nash.david@thinkdigit.com

It's May. You're either on your way to an exciting destination, or, well, you're not. If you are, this article could help, if not, it'll help you plan the next holiday you take. Most of us are all too familiar with the usual hustle and bustle of travel – book tickets and hotel rooms online. We're not covering that here. Instead, we're looking at all the other stuff that's also important.

Look before you leap

Before you even think of booking your tickets, make sure you have all the information you'll need. Pause for a while and ponder over your requirements. You need portability – try to get all your

needs met with as little hardware as possible. Control your urge to carry *all* your prized possessions with you during your trip. You may carry a high-end camera if you want to, but if you're not going to showcase your pictures, then you can get more than your want from smartphones these days! Similarly, you may carry a studio grade laptop, despite a netbook, or tablet meeting all your requirements on the go. The best balance is being able to keep it, portable, light and easy to carry around yet giving you access to all possibilities.

Stay connected

Remember you're vacationing! That means no work. No heavy downloads. Technically, even GPRS should do. All your groundwork should be done

before you begin your journey. If you're in Shenzhen, you don't want to sift through Chinese web sites wondering how to get back to your hotel room! What would your condition be if you lost network coverage?

We suggest you take the mid way. For data connectivity and to take advantage of the superior app-driven ecosystem called iTunes, get a smartphone (could be a budget one that supports tethering) and an iPod Touch.

Get all the apps we recommend here onto your iPod Touch, so that you are not left stranded in the middle of the road, surrounded by souls that don't understand Hindi or English (or for that matter any regional Indian language).

You can use the iOS app on your iPod Touch and share data access via your

Travel for tech!

If you're still undecided about your holiday destination, check out an interesting list of getaways on page 52

Cover feature

smartphone, using a technique known as tethering. Plus, you get access to Apple's vast storehouse of secure and tested apps. Also, when you are in public places such as airports, access to wireless internet is generally provided for free. Moreover, you are reducing the sheer amount of hardware you would have otherwise have stuffed in your luggage.

Must haves

Whether it's your first trip to your planned destination, or whether you frequent this place every year, there are some things that will never change. You'll always need information such as exchange rates, taxi charges, best places to dine and also the best times to visit.

Exchange rates

Go to xe.com/mobile, and select the app for your version. XE covers more currency conversions than you'll ever need.

Local attractions

Once you've reached your destination, you're pretty much at the mercy of the people around you to guide you and inform you of the best shopping areas around, or even the major attractions of the place. Go to lonelyplanet.com/mobile and download the app for Android, iOS or mobile depending on your platform and you can have all the information you'll ever need. This is better than carrying a thick and heavy book around. Wouldn't you prefer carrying more shopping bags instead?

Genuine feedback

The best thing about user feedback is that you can be more sure that it's unbiased than some of the travel sites, since many hotels tie up with popular travel services to get good reviews, and to be the top suggestion. At tripadvisor.com/mobile you can get an app and receive advice from real people who will tell you whether hotel or homestay arrangements are worth it or not – and for destinations all over the globe.

Offline maps

Navigation is a great technology. GPS, A-GPS, triangulation are terms that

sound good. But they render you helpless if they don't work. The best option is to have maps on your phone that don't need a data connection to update. Thankfully, there is an option to download offline maps at offmaps.com and mapsdroyd.com.

You can also go to offlinemaps.codeplex.com and download Google Maps offline. With Google Maps offline, you no longer need a data connection or network coverage, or GPS signals, for that matter to find your way. Of course a GPS-enabled phone or a dedicated GPS device might be the best bet if you're travelling cross country across deserts or something. Google Maps will not get you to water!


Local weather forecast

Have you ever planned a family vacation by the beach, only to have all your plans thwarted by a storm? Before you begin your trip, make sure you know what to expect in terms of the weather conditions. From your smartphone, go to mobile.yahoo.com/weather and follow the instructions given on the page, specific to your mobile platform to stay updated with weather forecasts.

Cheap international calling

Mobile phone companies are extremely eager and happy to help you when you enquire about international roaming. They ought to be. If you consider the rates of international roaming with your service provider, you'll know why. A call from the US to India, while on roaming will cost you ₹165 per minute! Go to tinyurl.com/skp-mob and get the Skype app for your platform. If your phone doesn't support Skype, you can also buy Matrix calling cards that offer cheap call rates globally. For more details, go to matrix.in. They're not cheap, but they are cheaper than ₹165 a minute!

Precious moments

It's the interesting pictures that we share with our friends and relatives and comments we hear that add joy to our trips. You can add detail to your pictures with nifty functions such as geotagging available on networks such as Flickr. Go to mobile.yahoo.com/flickr and download the app for your platform. 



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Claim your GST

Remember to claim your 7 percent GST. You can do this at the airport by getting your bill receipt stamped by the customs department

Free advice

Always carry a laptop with you to test phone software and games before you purchase them

Travel to satisfy the geek in you

Usually people pick places to go based on what there is to do or see there. So where do geeks go on a holiday?

Sambhav Daffu

sambhav.daffu@thinkdigit.com

Haven't we all been dragged out of malls and shops by friends or family, because we got so engrossed drooling over the spread of tech products on offer, that we lost count of hours?

Summer is usually the onset of the uncomfortable heat in India, and also the season for holidays. Now it's not like you can drag family and friends along on a geek holiday, so instead we tell you how geeks can have some fun at some of the most popular destinations across Asia.

SINGAPORE

Singapore is considered a shopper's paradise. Two major electronic attractions of the city are Sim Lim Square and Funan Digital Life mall. Sim Lim Square has seven stories of nothing but tech oozing out of every corner, and is spread over an area of 390,000 square feet. Rudresh, an ex-Digit writer from Singapore, says, "Come prepared to walk a lot, and

don't forget to bring your bargaining skills with you on your trip." The place is humongous, and you could spend days there without visiting the same shop twice. Most shops stack products from different vendors – making them a one stop shop for all your gadget needs. Consider this: you'll find 23 shops selling GPS devices and over 35 selling audio and video equipment. Remember, "shops" are not like our corner shops that sell mobiles, mice and keyboards, here they're actually more like Indian "showrooms".

Sim Lim Square sells Apple products for cheap, and Apple paraphernalia for even cheaper. It's also situated near Little India and is accessible via MRT which is the local train transit system of Singapore.

Another great destination to buy electronic products in Singapore is Funan Digital Life Mall. Considered an upmarket competitor of the Sim Lim Mall, the biggest tech shop here is Challenger Superstore which occupies almost the entire sixth floor of the mall and is operational 24 hours – perfect for that 3 AM craving for an NVIDIA GTX 590!

Another big store worth checking out here is Harvey Norman. Funan Digital Life mall also hosts regular promotional events and exhibitions for new product launches.

Tip: *Singapore is a little cheaper in terms of MP3 players, look for these.*

BANGKOK

Bangkok is another popular vacation spot, and although its popularity is not really because of tech, thankfully the locals are tech crazy enough to warrant some of the best shopping in South-East Asia.

Your first stop here should be Pantip Plaza, which is basically a mall dedicated to just tech. No clothes and shoes and other nonsense here.

You will find large stores from HP, Canon and Brother on the ground floor. The rest of the mall is filled with dealers that sell high-end computer gear, scanners, laptops, printers, etc. Data IT is a mini computer superstore on the second floor, and you'll find pretty much anything you need there.

The third floor is pirate heaven, and although as good Digitians we expect you to put on blinders and walk straight up to the fourth floor, something tells us you won't! You will get absolutely everything under the sun in terms of software and games here. The IT City is the entire fifth floor, and sells pre-built computers, and hosts exhibitions.

Digital Gateway is a four storied IT hub in Bangkok. You'll find



Masterchief gifts a copy of Halo Reach along with a Halo Xbox controller to a contest winner at Funan Digital Life mall, Singapore

all the latest gadgets and IT related exhibitions happening here. Most big technology brands have stores here, including Samsung, Sony and Fujitsu. Of course, you will also find independent IT dealers here as well.

Also check out Fortune Town IT Mall which offers friendlier services than Pantip Plaza, and if you're looking for some family time out topped with some electronic shopping then head to MBK Center.

Tips: *Look for shops where Thai people are buying stuff from, chances are you'll find the best bargain deals there.*

For those who don't want pirated stuff, Digital Gateway is the place to be.

PLAN YOUR TRAVEL AROUND THESE EVENTS

Where: Australia

What: CeBIT Australia 2011

When: May 31st to June 2nd

Where: Taiwan

What: Computex 2011

When: May 31st to June 4th

Where: Hong Kong

What: Hong Kong electronic fair

When: October 13th to 16th

Where: Singapore

What: SITEX IT Show

When: November 24th to 27th

Tech shopping in Japan

Indulge in some duty free shopping at one of the most biggest electronics stores in Tokyo - LaOX

Tech buyer's guide

Check out Time magazine's tech buyer's guide 2010 before splurging. Here's the link <http://ti.me/eZM4dY>

Cover feature

MALAYSIA

Low Yat Plaza (LYP) is to Malaysia what Sim Lim Square is to Singapore. A favourite among technology lovers, it has all electronic stuff you might want to shop for. The shopping arcade is detailed and has shops with a lot of variety. Geeks native to the area are quite active on Low Yat's forum, where you can find updates about new product launches.

HONG KONG

Hong Kong has been synonymous with cheap electronic shopping. However, there's not as huge a difference as there used to be between other South



Aerial view of Data IT store at Pantip Plaza, Bangkok

TECH SHOPPING IN INDIA

If you live in a metro city, chances are that you will know your way around the computer markets there. However, if you're not from that city, here are a few things you should know, just in case you find yourself visiting for work or vacation. Stores such as Croma and Reliance Digital across many cities now, but you still will not get PC peripherals at these places.

Delhi: Nehru Place is the most cited tech stop, and you can also check out Palika Bazaar and Gaffar Market, but these places are not very reliable.

Mumbai: The mecca of tech here is Lamington Road, you can find computer parts and accessories shop in every nook and corner here.

Bangalore: Computer shops at SP Road are a dime a dozen, but it pays to tag along with someone who knows the place well.

Chennai: Best place to buy computer peripherals is Ritchie street, the place is very crowded most of the time, so carry enough water to avoid getting sun stroke.

Asian countries. Still, HK is just ahead of the others for tech shopping.

The spirit of HK shopping lies in its street culture as you can find anything from cheap trinkets to expensive gadgets piled one on top of another at these markets.

Temple street market is the place to go for tech purchases, a lot of the shops here also sell second-hand mobile phones. Make sure you do a thorough check of the packaging and the device before coughing up your money. Another place is Golden computer arcade

where you'll find independent shops selling almost everything that has a chip in it. A few attractions of this place are inane toy bots. If you're die hard gamer then this the place where you'll find your salvation. The price margins here are pretty tight so the quintessential bargaining techniques might not work here. Be prepared for a sensory overload as you'll see more of tech products than anywhere else. Check out the Centralfield store here, store assistants know their stuff and aren't pushy.

Tip: Look for international warranties while making a purchase.

3M India
MCX
SEBI
HSBC
NSE
Barclays
Stumpp Scheule
GE Money
Religare Realty
ITC Maurya
Hyatt Regency
Taj Lands End
ICICI Knowledge Park
Hindustan Aeronautics
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Accenture
Diamond Board

Partial List

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Bazaar

The latest in technology, including mobile phones, graphics cards and more, tested and reviewed for you

Clicking



Digital cameras have become a part and parcel of our daily lives. We're testing some of the most popular ones available and helping you choose one

Michael Browne

michael.browne@thinkdigit.com

Whether you plan a vacation, or are just looking to get into photography there's a lot a camera can do for you. At this point, we're probably sounding like the typical Croma salesman at the camera counter, and believe it or not, not all of us have come from the pedigree of film cameras, where composition and settings needed learning before clicking a shot. No, some of us were newbies to the world of still image capturing before working at Digit. But after seeing what a camera can do as a creator of memories, or as a hobby or even professionally, we're strong advocates of buying one.

If the evangelism of the previous paragraph elicited "meh" or "bah", let's get into it straight away. Before upping and buying a digital camera, you need to figure out what you need. There's no sense in buying an ultra zoom camera when all you want to do is take photos of your loved ones, conversely, an ultra compact would not help if you intend to shoot birds err the winged ones at least. Therefore, there's a camera for every need. Nowadays we're also seeing a lot of growing interest in dSLR cameras, and while we're not testing those hereunder it's important to note that a dSLR is a natural progression from a compact camera, once the user has pretty much mastered the basics of photography and wants to introduce more control to his

shots, with less interference from the cameras' AI system. Owing to the growing interest in dSLRs, we're also seeing the emergence of compact versions of these bulky beasts with detachable lenses, and larger sensors. While we didn't call for detachable lens cameras we still received two of them, the Olympus EPL-1 and the Sony NEX-5. We're testing them, but on account of their larger sensors, they put other cameras at a disadvantage. Even though the Sony NEX-5 was used as a benchmark, we haven't awarded any prizes to these two cameras.

CAMERAS UP TO ₹8,000: MINI CLICKERS

So you're one of those people who are upgrading from a cellphone camera and want something to click family photos and create

remembrances of that vacation you plan this year. There's a lot of camera that you can buy for 8,000 bucks these days, and while most of these clickers offer rather basic feature lists, it's better to spend today buying what you can afford now and start clicking, than to wait for that dream camera. A camera is a tool for you, no more and you're obviously looking for one that is idiot proof, with a rock solid auto mode, a decent zoom of around 4x, and 720p video recording would be a plus.

Features

The most basic clicker in the test managed to surprise us with a fairly decent feature set – the HP CB350 might not be able to give you a great image at ISO 400, but if you're not very discerning, it's hard to ignore decent performance at a price of ₹4,000 – we

TweetMyPC

This little app lets you control your PC remotely using twitter. All you need to do is post the right tweet. Download from: <http://tweetmypc.codeplex.com/>

Google's eco friendly maps

Google along with 80 other companies are collaborating with the Department of Energy in creating a database of Electric Vehicle charging stations using Google Mapping Tools

Camera test

we were also surprised to see HP participating, a brand not known for cameras, and given that they sent us only one model, this was a sort of fluke. A basic, but well built camera, with an IS on/off button near the shutter key, and some tacky menu buttons. We liked its viewfinder that was shockingly better than some costlier cameras, like the Canon SX130 IS. The Nikon Coolpix L24 was perhaps the most basic camera in terms of feature set, and doesn't even allow one to change the ISO setting, let alone shutter speed and aperture. The Fujifilm JV200 has a metal body, and looks a little better than the plainer Fujifilm J40. It also has a marginally longer zoom of 6.7x, which is pretty versatile for daily shooting.

The Canon IXUS 105 was the most basic Canon digital camera in this comparison, but it looked smarter than its costlier sibling the IXUS 130 with a matte-brushed aluminium finish. About the only feature it misses is the lack of 720p video recording, although when it came to image quality too, it seems the IXUS 130 takes the lead in the ISO tests, despite having a higher megapixel count that generally makes such tiny sensors produce more noise.

We liked Canon's menus - they're fairly well laid out with a good many intuitive settings. Obviously, Canon has one basic menu layout that they follow, and their cheaper cameras simply have less menu options, while retaining the same structure. The HP CB350 had a fairly decent menu, while the Nikon Coolpix L24 had the most basic menu, not even allowing manual ISO control.

Performance

To get things into perspective, image quality isn't excellent or even very good, but it's good

enough for what you pay, and shooting in daylight will get you good output. The HP CB350 starts to show noise at ISO 400, and this is visible even without looking at 100 per cent crops. None of the cameras in this category are immune from noise, not even the Canon IXUS 105, and noise smatters detail at ISO 800 onwards - graininess, loss of even coarser details and the image starts to look fuzzy at ISO 1600. Obviously, with such cameras, you're not looking to shoot at such settings, although the feature is available for emergency use. Also at ISO 3200, the HP CB350 and Fujifilm J40 interpolate the image, giving you a much smaller resolution of 3 megapixels; therefore ISO 3200 is not really a usable feature on these cameras.

The one thumb rule when shopping on a shoestring budget is to buy the cheapest available camera with a decent feature set and acceptable performance. There's no point spending 50 per cent more, for something that performs 20 per cent better. If you really want something significantly better, you'd be better off spending 10,000 bucks or more. If we had to pick a camera that impressed us the most, it would be the Fujifilm Finepix JV200 - we just couldn't resist the allure of a good performer coupled with the 6.7x optical zoom - a versatile package. It was another that took the accolade of our Best Buy - the HP CB350, mainly for the 50 per cent smaller hole it will burn in your pocket, for 4,000 bucks you cannot ask for much more. Well... maybe slightly better performance and a Lithium Ion battery.

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BEST?**

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HOW WE TESTED

We divided our test candidates firstly on the basis of the type of camera - compact point-and-shoot, ultra zoom and advanced point-and-shoots. In advanced point and shoots, we further segregated compact cameras like the Canon S95 and Nikon P7000 and removable lens cameras like the Sony NEX-5 and Olympus EPL-1. While some might consider these dSLRs in the strictest sense, the simple fact remains that manufacturers aren't selling them that way. We're also moving into a market scenario where these cameras compete with dSLRs at a similar price range, and give up very little, except a proper viewfinder and a larger, better laid out set of controls. After category based segregations were done, we further divided these categories on the basis of price. For ultra zooms we didn't, because these cameras didn't seem to differ on features to a large extent.

Once again, we've given build quality and ergonomics a separate category of its own, and in terms of weights, features and build/ergonomics got 30 and 20 respectively, with 50 points going to performance. Our features and build/ergonomics is pretty self explanatory, but for performance we used a number of scenarios. Firstly, we set up a studio scene which we've attached a photo of here. This scene consists plastic flowers, cloth, fake fruit, colour pencils, paper clips and a couple of other elements. These elements were chosen as tests of various parameters of a camera's sensor



Test scene

and optical system. Detailing on flowers is a test, as is the subtle nuances of colour change on the petals, and texture and detailing on the surface - this tests a camera's dynamic range as well as the resolving capability of sensor and lens. For our quality test consisting of detail and dynamic range, we used a setting of ISO 100, an aperture of f5.6, a shutter speed of 1/5 second, while keeping the cameras mounted on the tripod to prevent shake. Centre weighted metering and auto white balance was used, and flash was disabled. Some cameras that didn't have manual control over settings like aperture and shutter speed, we set the ISO at 100, and then took the shot. Additionally, this scene was captured using flash in a dark room to check flash performance, toning down to prevent overexposure and so on. We also took shots at ISO 400, 800, 1600, 3200 and 6400 (for cameras that supported these) to check the performance of the sensor in "high gain" mode. Focussing accuracy was tested outdoors, by focussing on a building edge at both wide and long end of the zoom, and on some shrubbery in our office. For all these tests we worked with 100% crops, and at times, had as many as 5 images open - the outputs of different cameras being compared.

For testing video quality we played back the files on our test PC and also checked for audio quality. All these scores, including the still images were rated subjectively on a scale of 10.

Do more with your camera

10 photography hacks from Lifehacker include creating an instant green screen, macro lens and many more: <http://lifehack.kr/digitcam>

We want “HTTPS now”

The Electronic Frontier Foundation together with Access, a digital freedom activist group have started the campaign “HTTPS now” to spread awareness about internet security

up to 15 grand on a camera, so we're not going to attempt pseudo-hogwash of any kind. You know what you want (hopefully), and, even more hopefully, know what you can expect. At this price point you can pick up a super compact camera, or a slightly bulkier one with a longer zoom, a class of camera we have fondly nicknamed “super zooms”. These offer a zoom of between 8x and 12x. A camera with a longer zoom sounds more versatile, but the fact is that you really need to use the zoom before it is actually used. If all you want is to capture photos of family and such, you'll rarely need a zoom greater than 5x. However, this doesn't mean a 12x zoom is bad, as we said, such cameras are more versatile, but they might give up some image quality to a similar sized and similar priced camera, with a smaller optical zoom. Cameras with greater zooms also tend to be bulkier – there's only so much room in which to compress quality optics, and there's a reason why some of Nikon and Canon pro-grade lenses weigh as much as 7 such compact cameras.

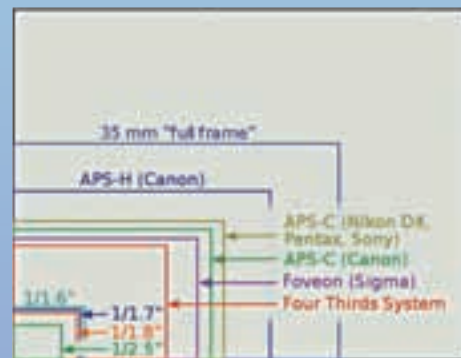
Features

Four cameras – and all reasonably well built specimens. We'll start with the costliest of the bunch, the Nikon Coolpix S8100 – a well-built, sleek looking camera. Made of metal, this S8100 feels very dense in hand and offers a great zoom of 10x, while retaining a slightly slimmer body with a smaller lens bulge than Canons SX130 IS that nonetheless has a slightly longer zoom at 12x. One thing we really loved about the S8100 was its LCD – crisp, bright and in a word – great. The SX130 IS has a dismal LCD particularly when in Live View mode – poor colour, and there is visible ghosting and noise. The Fujifilm T200 was the

SENSORS AND SENSOR SIZES – WHY DO I CARE?

Unlike a film camera, where photosensitive chemicals are exposed to light, any digital camera features an analog device called a sensor. A sensor functionally receives an optical image from a lens, and converts it into an electric signal. Each sensor has millions of photo-diodes. Once exposed to light, these sensors are essentially “charged” and this charge value has to be read for each pixel, and this analog reading is converted to a digital value by other circuitry. This circuitry could be near the photo-diode (CMOS), or off the photo-sensitive area (CCD).

The two most common types of sensors used are CMOS and CCD. These differ in terms of where the charge is read and converted, the size of chip, the cost of manufacture and battery life. In terms of quality, there are about equal these days, though most DSLRs come with CMOS sensors, this is done to keep costs down and increase the number of shots on a single battery charge. More importantly, for a photographer, or even a casual clicker, it is important to know that sensors come in different sizes, and like most things, the larger the better.



Medium format Kodak KAF 3900 sensor

For a sensor to capture more light, you must increase the gain on the sensor, allowing it to amplify the given light. Any amplification of a signal beyond viable limits deteriorates the signal, and in case of camera sensors, this translates to noise. Therefore, a larger surface area given to each photodiode works wonders for their ability to “gather” light, the only problem being the sharply increasing cost of manufacturing a larger chip. This is why manufacturing a full frame sensor of say, a Canon EOS 5D Mark 2 would cost more than manufacturing an entire compact camera, especially if you take into account the amount spent on researching these larger, more complicated sensors.

For example, the sensor on a compact camera measures approximately 6 x 4.5mm giving it a surface area of 27mm², while for a full frame camera this is 36 x 24mm, equalling 864mm². When looking at this from a megapixel perspective, given a fixed megapixel rating, a sensor with a larger surface area would capture more light, requiring less signal amplification to produce the same amount of light as a smaller sensor and thereby producing less noise. Larger sensors have other benefits as well but those are beyond the purview of this test. Below is a look at different common sensor sizes.

other one that stood out – a really slim profile concealing a 10x zoom where we'd figured (given its size) would be closer to 5x. The plastic stick-on in front that is supposed to double as a grip is a pain though – it is anything but grippy, and really Fujifilm could have omitted it to no usability or appearance loss. What we didn't like about the Fujifilm T200 was the actual action of zooming that isn't consistent – it's slow till 2.5x or so then speeds up to 8.6x. From 8.6x to 10x there is essentially a single step with no gradation in between, so you cannot zoom to 9x for example.

The Canon IXUS 130 was the baby zoom in this group offering

a mere 4x optical zoom, while also managing to be the most compact camera in this category and also matching most of the others in terms of build, although if we had to give out a trophy for the best built clicker, it'd have to be the Nikon Coolpix S8100, which also features (interestingly) a backside illumination CMOS sensor – a new technology that is supposed to improve performance in lower light or at higher ISOs, depending on how you look at it.

Canon cameras have a wonderful zoom – it is slower or fast depending on finger pressure applied to the zoom ring – we're coining a phrase for this feature and calling it “variable pressure

zoom”, feel free to come up with something better, and let us know about it. Regardless of the name, it works well, you can quickly zoom, or slowly zoom into anything – very useful for photography and even more useful when shooting videos especially if you want to give a slow pan and zoom effect.

Performance

Although the Coolpix S8100 didn't live up to the high ISO expectancies we had, it did a good job keeping the competition at bay in the high ISO tests. Curiously, at ISO 160, its base ISO, we found the image to be a little flat, lacking the sort of specular highlights and

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Gobbling gamers

A Canadian-Danish study has led to the conclusion that video games make a person eat more even when they are not hungry

Amazon's Kindle library

Amazon will launch the Kindle Library Lending service later this year which will allow U.S Kindle customers to borrow kindle books from participating libraries

INTERCHANGEABLE LENS COMPACTS

Olympus EPL-1

This is a micro four-thirds camera, meaning it has a slightly larger sensor than the compact cameras we've looked at earlier. It has a burly look that is both clean and smart. From the neat recessed power button on the top to the silver finished body, the EPL 1 looks nice, if a



Olympus EPL-1

bit squarish. There is a grip provided, though it's not very large and thus not very good. On the top is a dial that exudes solid feedback and an audible click, but it's too hard to operate with one thumb, this dial controls the shooting modes. The recessed flash has a 2-piece armature, and there's a slider switch that releases the flash from its cubbyhole. A nice large, video record button with delicately soft feedback sits on the rear in easy reach of your thumb. The controls on the rear are pretty well laid out and quite intuitive to use, even though we'd like a little more spacing between some buttons, as Canon has done – there's a lot of wasted space around the microphone port on the rear, probably done to prevent it picking up noise of your finger as buttons are used.

The LCD is smaller than what we're used to, but it is very clear, and has no lag. Also absent is the flickering seen on cheaper displays. The 14-42mm lens we received feels a bit cheaper than the camera body itself. The zoom ring is wide enough to be gripped properly, but it feels a little rough at times, unlike the super smooth mechanism on the Sony NEX-5.

The output from the EPL-1 is quite frankly stunning. Taken in perspective, it's no EOS 7D, but when compared to the other cameras here, it's easy to figure out why larger sensors are so revered. The final bit of detail that seemed to be lacking from all the other sensors is present here, and the EPL-1 produces the ridged texture

on the flowers where the fine weave of cloth used is visible even beneath the dye/paint. The highlighting on the paintbrush finally looks clean, even as the text is super legible. The slight plastic bumps on the surface of the artificial mango that was part of the test scene are visible, as the paper clips look clean and detailed even on the white portion of the cloth. Highlighting is also spot on and the output is quite neutral.

At ISO 800, the EPL-1 is showing the same output and detail levels that some of the cameras failed to produce at their base ISOs – commendable indeed. However, at ISO 1600, the output gets softer, with some fuzziness, and at ISO 3200, the EPL-1 starts to look like a regular camera. Still, there's a fair bit of headroom to be played with, and the message is clear – need to work with higher ISOs – use something with a larger sensor.

Sony NEX-5

The Sony NEX-5 is a very solidly built camera and the immediate in-hand feel is one of quality. The body feels extremely dense. Even the 18-55mm f3.5-5.6 lens we received features metal in the outer lens construction and feels really solid. The camera itself is quite slim other than the grip that is large (for such a slim camera) and feels quite substantial, despite the fact that it's no DSLR. The NEX-5 has a relatively large sensor for cameras of this size bracket, and it boasts of a 1.5x crop sensor, the same size of sensor as seen on the Nikon crop DSLRs, and at 14.2 megapixels, is probably the same sensor that Nikon features on the D3100.

There is a latch on the top that opens to reveal a port that accepts the modular flash. The display is large and it's needed, because Sony's menu system is mostly visual. This menu might seem cumbersome at first, but as time progresses, it's evident that Sony put a fair bit of thought into this rather radical looking and different menu. The rear dial along with 2 buttons that flank it are the only menu

controls you get and while most actions take a click longer than if you had dedicated keys, it works reasonably well. Many of the menu options are also newbie friendly, like the background de-focus tool that allows you to spin the rear dial and changes the depth-of-field by modifying the aperture. Or you can manually change the aperture without using the newbie friendly menu. Most of the menus are context sensitive, for example, in auto mode, you'll see helpful menus such as the one described above, whereas in manual mode, you will see numbers for aperture and shutter speed – this is a rather intuitive system that we appreciated, for it's as usable by first time users as by advanced users. The battery is a 1080 mAh unit. The LCD is quite crisp and doesn't lag at all, and the NEX-5 has a crisp sounding shutter that nevertheless clicks twice when taking one shot, a louder click followed by a softer sounding one.

The NEX-5 produces images that look noticeably better than the Olympus EPL-1. The blue mug that held the roses finally gives off specular highlights, revealing flaws on its surface, while the cloth texture of the roses is also clearly visible. The output isn't perfect, as the red on the apple is over-saturated, but this is more a sensor characteristic than a flaw and can be corrected. The first place where noise shows up is in specular highlights, such as chromed surfaces, but really, you need to watch for it. Even at ISO 800 the NEX-5 produces detail



Sony NEX 5

that all the cameras missed at base ISOs – really the sensor is shining here, and ISO 1600 is also surprisingly usable for up to 8x11-inch prints. We also suspect the tack-sharp lens is a major reason for the NEX-5 resolving such high detail.

Canon No. 1

By IDC reports Canon topped the 2010 compact camera makers ranking with highest numbers shipped. Sony was at second place

PlayStation Network targeted

Sony had to recently suspend its PlayStation Network for rebuilding as a result of external intrusion. PlayStation Network has around 70 million users

Camera test

vividness that one expects from a camera, and its output seemed to lack a bit of life, for lack of a better description. Additionally, even at the same shutter speed and aperture, the image seemed to be slightly underexposed, which only added to the problem. Obviously we could have remedied this and changed settings, but the test was not about tweaking each camera to look its best, rather than presenting them in a common light, if you'll pardon the unintentional pun.

The SX130 IS seems to be the least focussed of the four wide on, but at the longer end of the zoom, tightens up on this parameter a bit. Canons output is punchy, but lacks a bit of extra highlights on some objects, the image could be termed as lifelike, or a little less vivid, but most people shopping at this price range like bright, vivid and such, which might explain Canons relatively lower popularity in the lower price rungs. If you're looking at shooting at higher ISO settings, the Coolpix S8100 will be your best bet. The SX130 IS has the best zoom, but its poor LCD and AA batteries are turn offs.

The best value for money in this group was the Canon IXUS 130, and at a shade under 10,000 bucks is your best bet for a compact camera if zoom is not a concern, it also won our Best Buy Award. If zoom is your thing, the Nikon Coolpix is your Best Buy, at an MRP of ₹13,450.

PREMIUM COMPACTS (OVER ₹15,000): SPEND MORE GET MORE?

Now why would someone spend upward of ₹20,000 on a camera and not buy a dSLR, or even an ultra zoom? More importantly, what makes a ₹15,000 camera any less than a ₹25,000 one, given their feature sets on paper look pretty similar? These were

some of the questions that we intended to solve, after all, Canon offers an IXUS 130 for ₹10,000, and then an IXUS 210 for a cool ₹21,995 and an IXUS 1000 HS for a staggering ₹25,995 – a price at which you can pick up a Canon EOS 1000D – a dSLR, albeit an entry-level one. So what makes a camera worth so much?

Features

There are only two Canon cameras here, so there's not much in the way of awards that will happen here, the IXUS 1000 HS has a CMOS sensor opposed to its siblings' CCD sensor. Neither technology is really much better, although CMOS sensors need to be larger than CCD sensors to provide a similar image quality. Conversely, a CCD sensor will happily chew through battery power 20 times quicker. The IXUS 210 has a much better maximum aperture opening of f2.8 opposed to f3.4. This number is deceptive, and f2.8 is a significant step up from f3.4 – 50 per cent more of light is let into the scene. The IXUS 1000 HS has a trick up its sleeve, in fact two of them, other than the fact that it is a sexy looking camera. Firstly, the compact, slim body masks a substantial 10x optical zoom. Secondly, it can record videos in full HD i.e. 1080p.

These cameras have nice menus – they're not very deep, but they're pretty intuitive. Button placement is pretty decent, we've gone used to the extra buttons on dSLR cameras, but having fewer buttons coupled with more intuitive menus is not a bad thing.

Performance

The Canon IXUS 1000 HS has a pretty lower megapixel rating, and throughout the tests, it offers at least at par, or better, image quality compared to IXUS 210.

Especially in the higher ISO tests, it earns its premium that it is clear to see less smattering of pixels and a marginal amount of greater detail even at base ISOs. To put it plainly, the output from the IXUS 1000 HS at ISO 125, is better than the output produced by the Canon IXUS 210 at ISO 80 – images are cleaner, the flower petals have marginally more detail, and the paper clips are much cleaner and artefact-free. In fact, the IXUS 210 cannot resolve the micro detail around the paper clips, and its evident that the sensor isn't able to capture all the detail involving the texture of the cloth also.

However, we can't really recommend either of these cameras, given that, for their price, they're both a bit short of both features and quality. Actually, neither is a complete package – The IXUS 1000 HS offers a better quality output and has a nicer zoom, but for the price, it isn't as impressive in the higher ISO range as we'd have liked...quite the contrary, we preferred the output of the Nikon S8100 at ISO 800.

ULTRA ZOOM CAMERAS: YOUR WINDOW TO THE WORLD

The ultra zoom was a class of camera created solely for those who need to work with very long zooms and versatile focal lengths. We've seen optical zoom as a growing specification, though this is



Fujifilm S3300

one welcome area of expansion, unlike the alarming growth of megapixels on tiny sensors, the pitfalls of which is increasingly omnipresent noise. Earlier, cameras with optical zooms of up to 20x were considered ultra zooms, today, we have cameras like the Canon SX30 IS with an optical zoom of up to 35x – this makes it very versatile for people even interested in shooting wildlife. Ultra zoom cameras are not for everybody though – they're significantly heavier and bulkier than regular point-n-shoots, and not pocket-friendly. Owing to a large zoom, their optics might also not be up to the optics of a very nice compact camera. However, if you're looking to capture distant objects, you might want to check some of these cameras out. We received three of them, two from Fujifilm and one from Canon.

Features

The SX30 IS from Canon had the longest zoom – 35x. It's a chunky, but not unhandsome camera, with a matte black finish that looks industrial-grade. The outer lens housing is metal, while the inner barrel is plastic. Zooming is creamy smooth, and Canons variable pressure zoom works excellently. The articulating LCD is a plus, and although it's only 2.7-inches, it's a fairly high quality unit. Button placement and ergonomics is good – the SX30 IS has a lot of manual control, and these functions are assigned to dedicated buttons or they work through the onscreen menus – either way we had

no issues, although for the record, cameras like Nikon's P7000 and Canon's own G12 are way more intuitive to use. They ain't got the SX30 IS' grip though – finally a chunky grip and given the extra weight, it's needed. Even the thumb

	Compacts up to ₹8000					Compacts between 8001 and 15000				
Brand	HP	Nikon	Fujifilm	Fujifilm	Canon	Canon	Fujifilm	Canon	Nikon	
Model	CB 350	Coolpix L24	Finepix J40	FinePix JV200	IXUS 105	IXUS 130	Finepix T200	PowerShot SX130IS	Coolpix S8100	
Price (₹)	3,999	6,450	6,499	6,999	7,995	9,995	11,999	12,995	13,450	
Features (Out of 30)	14.13	15.57	14.94	15.27	14.82	17.64	15.48	19.86	20.37	
Build and Ergonomics (Out of 20)	14.76	11.94	12.67	12.73	13.63	13.66	13.02	13.52	14.17	
Performance (Out of 50)	28.00	21.69	23.84	28.34	23.59	27.53	27.71	27.16	30.20	
Grand Totals (Out of 100)	56.89	49.20	51.45	56.34	52.04	58.83	56.21	60.54	64.74	
Plus (+)	Compact, cheap	Affordable	Compact	Built well	Well built, good looks	Well built	Well built, compact	Good zoom	Good zoom, great LCD	
Minus (-)	Basic features	Basic settings	Mediocre quality	Lacks stereo audio	Basic feature set	Mediocre zoom	No full HD recording	Poor LCD	High ISO quality is mediocre	
Features and Specifications										
Sensor resolution (MP)	12.2MP	14.1MP	12.2MP	14MP	12.1MP	14.1MP	14MP	12MP	12.1MP	
Sensor type	CCD	CCD	CCD	CCD	CCD	CCD	CCD	CCD	CMOS	
ISO (low)	100	80	100	100	80	80	100	80	160	
ISO (high)	3200	1600	3200	1600	1600	1600	1600	1600	3200	
Shutter speed (fastest)	NA	1/2000 sec	1/1400 sec	1/1400 sec	1/1500 sec	1/1500 sec	1/2000 sec	1/2500 sec	1/4000 sec	
Shutter speed (slowest)	NA	4 sec	8 sec	8 sec	15 sec	15 sec	8 sec	15 sec	4 sec	
Manual Focus (Y/N)	N	N	N	N	N	Y	N	Y	Y	
Macro focus range	NA	5 cm	10 cm	3.5 cm	3 cm	3 cm	5 cm	1 cm	1 cm	
Aperture range	F3.1 - F5.6	F3.1 - F6.7	F2.9 - F5.2	F3.1 - F5.6	F2.8 - F5.9	F2.8 - F5.9	F3.4 - F5.6	F3.4 - F5.6	F3.5 - F5.6	
Built-in Flash (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	
External Flash	N	N	N	N	N	N	N	N	N	
Attached / Kit lens zoom	3x	3.6x	3x	6.7x	4x	4x	10x	35x	10x	
LCD Size	2.7-inch	3-inch	3-inch	2.7-inch	2.7-inch	2.7-inch	2.7-inch	3-inch	3-inch	
LCD Resolution (dots)	230,000	230,000	230,000	230,000	230,000	230,000	230,000	230,000	921,000	
Image Formats supported	JPEG	JPEG	JPEG	JPEG	JPEG	JPEG	JPEG	JPEG	JPEG	
Microphone type	Mono	Mono	Mono	Mono	Mono	Mono	Mono	Stereo	Stereo	
Max Video capture resolution	640 x 480	1280 x 720	640 x 480	1280 x 720	640 x 480	1280 x 720	1280 x 720	1280 x 720	1920 x 1080	
Battery Type (AA, Li-ion)	AA	AA	Li-ion	Li-ion	Li-ion	Li-ion	Li-ion	AA	Li-ion	
Memory card used	SD	SD	SD	SD	SD	SD	SD	SD	SD	
Weight (in grams)	141	182 (incl. battery)	113 (without battery)	125	140 (incl. battery)	133 (incl. battery)	151	314	209 (incl. battery)	
Build Quality (So 10)										
Body	7.5	7	7.5	7.25	8.25	8	7.75	7.5	8	
Lens (or kit lens)	6.75	6.5	6.75	6.5	7	7	6.5	7	7.25	
Buttons and dials	6.5	6.75	7	6.5	7	7	7	6.75	7.5	
Bays / moving parts	6.75	6.25	6	6.5	6.75	7	6.75	6.75	7.5	
LCD screen / status displays	7.25	6	7	6.25	6.75	7	6.5	6	7.5	
Ergonomics and usability (So 10)										
Grip comfort, handling and feel	6	6	6	6	6.25	6.25	6.25	6.5	6.25	
Layout of buttons and dials	6.5	6	6	6	6	6	6	6.5	7	
Intuitiveness of buttons and menu system	6.5	5.75	6.25	6.25	7	7	6.25	6.75	6.75	
Menu layout, options and ease of use	6.5	4.75	5.75	6.5	7	7	6.5	7	7	
Performance (So 10)										
Focussing accuracy (wide angle)	6.5	7	7.5	7	7.5	7.5	7.5	6.75	7.75	
Focussing accuracy (long end)	6.5	7	7.25	7.25	7.25	7.5	7.5	7	7.25	
Quality (dynamic range, highlighting)	6.25	5.75	6.5	7.25	6.25	6.5	7	6.5	5.5	
Quality (sharpness, micro-detail)	6	5.5	6.25	7.5	6	6.25	7.5	6.25	5.75	
Effectiveness of Image Stabilisation	6	6.5	7	7	7.75	7.75	6.5	7.75	7.5	
High ISO tests (So 10)										
ISO 800	4.25	0	5	6	6	6.25	6	6	6.75	
ISO 1600	2.75	0	3.5	4	3.5	5	3	4.75	5.25	
ISO 3200	1.5	0	2.5	0	0	0	0	0	3.25	
ISO 6400	0	0	0	0	0	0	0	0	0	
Flash test (portrait)	6.75	6.25	6.75	7.25	7	7.25	7	7.25	6.75	
Flash test (fill-scene)	6	6	6.25	7	6.5	7	6.5	7	6.5	
Video Quality (720p)	0	6.5	0	6.5	0	6.5	6.5	6.25	6.5	
Video Quality (1080p)	0	0	0	0	0	0	0	0	6.5	
Audio Quality	5.5	5	5.5	6.25	5.25	6.25	6.25	7	6.5	



Camera test

Compacts above 15K		Ultra zooms			Prosumer Compacts			Prosumer interchangeable lens	
Canon	Canon	FujiFilm	Fujifilm	Canon	Nikon	Canon	Canon	Olympus	Sony
IXUS 210	IXUS 1000 HS	FinePix S3300	Finepix HS20EXR	Powershot SX30IS	Coolpix P7000	PowerShot S95	Powershot G12	Pen EPL-1	NEX-5
21,995	25,995	15,999	26,995	28,995	26,950	26,995	31,995	29,999	34,990
17.46	18.78	19.08	24.96	23.52	23.16	22.74	22.23	22.41	22.92
13.7	13.92	13.66	14.19	14.43	15.08	14.53	14.92	14.4	15.16
27.78	29.59	25.88	29.50	29.46	31.80	30.99	32.30	33.56	37.78
58.94	62.29	58.62	68.65	67.41	70.04	68.26	69.45	70.37	75.86
Decent performer	Looks good, good zoom	huge zoom range	Long zoom, decent performer	35x optical zoom	Great ergonomics and image quality	Slim, manual controls	Great manual control and image quality	Good performer, nice LCD	Well built, great image quality
Expensive	Expensive	Basic image quality and build	Basic build quality	Higher ISO performance is disappointing	Lacks full HD recording	P7000 offers more for less	Overpriced	Lacks full HD video	Expensive
14.1MP	10MP	10MP	16MP	4320 x 3240	10.1MP	10MP	10MP	12.3MP	14.2
CCD	CMOS	CCD	EXRCMOS	CCD	CCD	CCD	CCD	CMOS	CMOS
80	125	64	100	80	100	80	80	100	100
1600	3200	1600	3200	1600	3200	3200	3200	3200	1600
1/3000 sec	1/4000 sec	1/2000 sec	1/4000 sec	1/3200 sec	1/4000 sec	1/1600 sec	1/4000 sec	1/2000 sec	1/4000 sec
15 sec	15 sec	8 sec	30 sec	15 sec	60 sec	15 sec	15 sec	60 sec	30 sec
N	N	N	Y	Y	Y	Y	Y	Y	Y
5 cm	1 cm	2.5cm	1 cm	0 cm	2 cm	5 cm	1 cm	NA	NA
F2.8 - F5.9	F3.4 - F7.1	F3.1 - F5.9	F2.8 - F5.6	F2.7 - F5.8	F2.8 - F5.6	F2.0 - F4.9	F2.8 - F4.5	NA	F3.5 - F5.6
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	N	N	Y	Y	N	N	Y	Y	Y
5x	10x	26x	30x	35x	7.1x	3.8x	5x	14x	3x
3.5-inch	3-inch	3.0-inch	3-inch	2.7-inch	3-inch	3-inch	2.8-inch	2.7-inch	3-inch
461,000	230,000	230,000	460,000	230,000	921,000	461,000	461,000	230,000	921,600
JPEG	JPEG	JPEG	JPEG	JPEG	JPEG, RAW	JPEG, RAW	JPEG, RAW	JPEG	JPEG
Stereo	Stereo	Mono	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo
1280 x 720	1920 x 1080	1280 x 720	1920 x 1080	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1920 x 1080
Li-ion	Li-ion	Li-ion	AA	Li-ion	Li-ion	Li-ion	Li-ion	Li-ion	Li-ion
SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
160 (incl. battery)	190 (incl. battery)	540 (incl. battery)	730 (incl. battery)	601 (incl. battery)	360 (incl. battery)	195 (incl. battery)	401 (incl. Battery)	344 (incl. battery)	287 (incl. battery)
8	8.25	6.5	7.25	7.25	8.25	8	8.25	8.25	8.75
7	7	6.5	6.75	7.25	7	7	7	6.75	8.5
7.25	7.25	7	7.25	7	7.5	7.25	7.5	7	8
7	7.25	7	7.25	7.25	7.5	7	7.5	7.5	8
7	7.5	6.5	7	7.5	8	7.25	8	7.75	8
6.25	6.25	7.25	7.5	7	6.5	6.25	6.5	7	7.25
6	6.25	7.25	7.5	7	8	7.5	7.75	7.25	7
7	7	6.75	7	7.5	7.75	7.5	7.5	7	7.25
7	7	6.5	6.5	7.25	7.5	7.5	7.5	7	7
7.5	7.5	7.75	6.75	7.75	8	7.75	7.75	8	8
7.5	7.5	7.5	7.5	7.75	7.75	7.5	7.75	7.75	7.75
6.5	6.75	7	7	7	7.75	7.75	8	8.5	8.5
6.25	6.75	7.5	5.75	7	7.75	8	8.25	8.5	8.75
7.75	8	6.75	7	9	8	7	7.75	7.5	7.25
6.75	6.75	4.5	4.75	6.25	7.25	6.75	7.25	8	7.75
5.25	5.5	3.25	3.5	4.75	6	5.25	6	7	6.5
0	3.75	2.5	2.75	0	4	4	4.5	5.5	5
0	0	0	0	0	0	0	0	0	4
7.25	7.25	7	7.25	7.25	7.25	7.25	7.5	7.5	7
6.5	7	6.5	7	6.5	7	7	7.25	7.5	7
6.75	7	6.75	6.75	7.25	7.25	7	7	7.25	7
0	0	0	6.75	0	0	0	0	0	7.5
6.5	6.75	6.25	6.5	7	6.75	6.5	6.5	6	7.5

Bulk photo and video uploading

Dropbox has updated its iOS app and enabled it to upload bulk photos and videos

Slew of new dSLRs

Even as Canon introduced the EOS 1100D and EOS 600D this month, Nikon quietly slipped in the D5100

recess with its dimpled contours is actually grippy. We don't like the viewfinder though, it is an electronic type and feels like a cheap add-on – ditch it Canon.

Of the two Fujifilm's, the Finepix S3300 is a lot cheaper, in fact, it plays the same game at nearly half the cost of the other two cameras. Unlike its costlier sibling, the Fujifilm HS20 EXR, it won't record videos at 1080p, and neither does it have as good a build. The two Fujifilm cameras have the same silhouette – they have exaggerated grip portions, that are deep without being substantial and while this allows your fingers to curl inwards making for a secure grip, it's not as substantial as the grip on a dSLR. Right, it wasn't meant to be...What we didn't like, was the fact that the S3300 feels like a cheaper cousin to the HS20 EXR – from the body surface, to the lens.

On topic of lens the Fujifilm HS20 EXR features manual zoom and while we dig the extra bit of control, we question its need, especially given it needs variable pressure to use and isn't as smooth as we'd like. The inner barrel of the lens is metal however, unlike Canon that uses a plastic barrel on the SX30IS. There's a nice large mode dial set into the top at an attractive angle, while the dial next to it allows changing settings in conjunction with activating a function. The LCD articulates but unlike the hinge cum twist mechanism used by Canon, this is a 2-way hinge built into the camera body. As a result the LCD cannot orient sideways i.e. horizontally, but only vertically. Functions like ISO and aperture have dedicated buttons and once selected, the dial atop can change the corresponding setting – for the most this setup works pretty well.

There is an electronic view-

finder provided on the HS20 EXR, but its pretty archaic, and you're better off using the LCD. The video record button is small and recessed and therefore not intuitive to use, but it is located conveniently. The SD card slot is built into the side and the mechanism similar to dSLRs like the Nikon D7000. Four AA batteries are used – and these make the camera heavy, we'd have loved a Li-ion battery. The focus ring on the lens is set back into the body, though thankfully usability doesn't suffer much on this account.

The S3300 loses on the settings dial on the top and just has a mode dial with no rear dial. As a result, settings are a bit tougher to change. We also don't like the hard joypad buttons and the menu button set within the joypad. This one features a zoom ring, and we figure we can live without the manual zoom, which becomes impractical when dealing with larger focal ranges. Settings are abundant although making these changes is a little more tedious. The lens features a maximum aperture of f3.1, which is not much considering cameras like the SX30IS offer an aperture of f2.7 and this makes quite a difference in terms of light gathering.

Performance

The Canon SX30 IS offers better still image quality than both Fujifilm cameras. The output is a little soft, but there's a fair bit of detail available, at least the image doesn't seem to suffer from over-much noise, unlike the output from the Fujifilm cameras, that seem plagued with the same. The SX30 IS produces neutral images, and though we'd like a little more life to the highlighting, one cannot argue that Canon is giving you about as close to a realistic experience as possible.

The S3300 offered highlights, but these seem clipped. Orange is a little warmer than we'd like, and there is a noticeable lack of detail in the reds, the dynamic range of this sensor seems mediocre. The Fujifilm HS20 EXR displays artificial looking grain-like artefacts on some fruit, and once again, highlighting is missing, even the SX30 IS that we didn't think was great bested it by a fair margin.

So why did the HS20 EXR get a marginally higher score than the SX30 IS? Well, both Fujifilm cameras do ISO 3200, and while the output is poor, at least the setting is available and they get a few point apiece for "participating". Also the HS20 EXR gets a decent score for 1080p recording, whereas the SX30 IS gets a rounded off zero, having missed this feature. If you're after the better camera, the SX30 IS is your best bet, and for low light, blows both Fujifilm cameras out of the water.

Our Best Buy however, is the Fujifilm S3300, given that you can buy nearly two of them for a single Canon SX30 IS and the performance while nothing close to Canon, is not exactly 50 per cent worse.

PROSUMER COMPACTS QUALITY MEETS MANUAL CONTROL

The above tag about sums up these cameras – they're not cheap, but neither is an iPhone, a GTX 580 or even a Ninja 250R. However, they are designed with a niche audience in mind – the kind of person who is interested in taking good quality photos, and knows enough about photography to care about manual control, and not just a full manual mode, but a set of buttons, dials and controls that allow him to really change settings quickly, intuitively and effectively. After all, to discerning clickers, it is all

about the shot, and a good camera is a given. Sadly, there's no substitute for lots of dials and buttons, and while we reviewers praise dSLRs and their ilk for having a lot of well laid out manual controls, our hearts yearn for a better system. Don't feel our pain? Spend a year mastering controls and getting good shots on a Canon EOS 7D, and then promptly try taking quick shots in manual mode on a Nikon D300s and you'll get our drift.

All three cameras here are quite special. They're compact, but they borrow several tricks used in dSLRs to make their user more at home and provide more controls to each finger, just as long as your fingers are nimble, you won't have any issues. But that's not all – they also provide better sensors, better electronics to better control noise, and better-built bodies with better and more ergonomic designs.

Features

There's a bag full of features to be found here. The Nikon P7000 and Canon G12 look suspiciously alike. They're both powerful compacts, designed with the intent of giving clickers a more serious body, without the hassles of changing lenses and the extra weight and bulk of a dSLR. Both bodies are bristling with dials – they both feature as many as five. Finally we see a Nikon with the variable pressure zoom although Canon's system works better. The P7000 has an exposure compensation dial on the top of the camera, and a scene dial next to it. However, neither are usable with one thumb. On the top of the left side is another dial and this one allows quick access to a number of settings – quality, ISO setting and white balancing to name a few. Select a function and click the inset button and it's activated to be changed via spinning the rear

5D Mark 2 refresh rumours

Experts feel a Canon 5D Mark 3 is coming soon. Specs include a 26.4 MP FF sensor, 4.9 fps, 19 point AF system and 100% coverage

Camera prices rise

The calamity in Japan has affected even grey market camera prices, and all cameras have experience hikes of around 5 per cent

Camera test

dial. Aperture and shutter speed also get dedicated dials, the rear dial works as an aperture control in manual mode.

Both cameras are solidly built although the G12 also has an articulating LCD – a nice plus. The G12 also gets a lot of dedicated controls namely dials for aperture and shutter speed in manual mode. It's nice to see buttons that are wedge shaped according to the orientation of your thumb i.e. the ones below the rear dial slope downwards while the ones beneath it slope upwards, which is exactly how your thumb touches them. In terms of usability both Nikon P7000 and Canon G12 are much better than many of the basic cameras, if manual control is your thing.

The S95 is a slightly different beast. It actually has a lens ring that can be configured to change one from among a number of settings on the fly. The S95 is smaller than either of the other cameras, but offers a rugged aluminium chassis and a slimmer profile. Zoom is only 3.8x, while RAW mode is supported as an attraction to those who like to tweak their images using editors. The lens on the S95 goes down to f2 at the wide end – pretty useful for shooting in dim lighting. There is once again a lot of control, even though the S95 has fewer dials, it doesn't seem to miss them much. We had two minor gripes - the top model dial button is positioned where the shutter release button seemed more intuitive for our index finger. And the zoom is a

bit noisy, it almost seems harsh given the smooth action on the other two cameras. Additionally, we'd like a zoom range of 5x on the S95, but this wasn't to be. For the record, the P7000 excels here, with a zoom of 7.1x, although zooming on the Canon cameras is a much more intuitive affair.

Performance

There are many aspects to these cameras performance. In terms of zoom, the Canon G12 has the slickest action. In terms of image quality, we're looking at three 10-megapixel sensors, all of them CCD, and once again, it seems like the Canon G12 produces marginally better looking images. While the S95 exposes better at the same shutter, we used a fixed aperture of f5.6 to nullify this and the G12 really produces a clean, artefact free image with lots of fine detail. But neither sensor is perfect. We see the Canon producing marginally more detail in the paper clips, only to fall at par with the other two sensors when it comes to producing details on the flower petals. We see the Canon produce a bright, artificial and detail-less orange, while Nikon produces a faded looking orange, albeit with more detail. Nikon produces a slightly warmer image, with a bit of a yellowish tinge, while Canon produces a visibly cooler image – neither is perfect. The S95 produces an output very close to the G12, although it produces a better, more detailed orange, it loses its composure when trying to reproduce the intricate

details of texture on the flower petals. The Nikon P7000 produces more detail on the paper clips, only to produce a softer looking golf ball, with less sharp looking dimples.

None of these cameras are perfect, and you might wonder why we're nit picking about such minor details when we didn't do so for the cheaper cameras. Well, when you're paying upward of ₹25,000, in lieu of 10,000 bucks, you do expect more right? So do we...

If we had to buy one of these three, which one would we get? Well, their performance was about the same, but with an advantage in terms of optical zoom, and a lower price tag, the Nikon P7000 is hard to beat. It wins our coveted Best Buy and is the camera to get for the discerning clicker.

PROSUMER INTERCHANGEABLE LENS: WHEN A DSLR IS TOO BIG

So, you've owned that compact point-n-shoot for three years now, and have gone mighty comfortable with manual control. Aperture, exposure and metering are not Greek to you, and you fancy yourself a hotshot photographer, but you need a new, better set of tools. Well, not quite ready for a dSLR? Don't want something bulky and un-concealable to go with your slick lifestyle? But you demand quality. You might want to take a look at the two cameras we've got here. They both feature

detachable lenses and can be used with different lenses much like dSLR cameras. They even have manual controls, and one of them even has a very capable dSLR sensor.

But wait, if so, then what good are dSLRs? Well, these cameras are good, but let's face it – they're no Nikon D700 replacement, and if you need a dSLR, buy a dSLR. In our opinion, professionals and serious hobbyists will still opt for a dSLR, for these cameras haven't quite reached those levels of quality, but if you're looking for a good compact camera, these will pretty much offer the highest per pixel quality you'll likely see.

Closing thoughts

There's been a lot happening in the camera world, as technology has been steadily improving. There's been talk of mirror-less systems taking over dSLR cameras, but for the moment, we feel this is hogwash – dSLRs have too developed an ecosystem and too much money has gone into their development, although we admit that the flip-up mirror does take up a lot of space. This time round, we had a good bunch of cameras, even the more affordable ones offered decent results. The more expensive cameras offered proportionately better features, while we're finally seeing the upper echelon of compact cameras raising the bar of performance and closing the gap between themselves and lower-end dSLRs. However, such cameras are still a far cry from the full frame monsters and premium lenses that we see as part of the tools made available to professionals by the likes of companies like Canon, Nikon and Sony. The important thing here is that paying a lot less doesn't get you rubbish, and all said and done, if you're on the lookout for a compact clicker, you are spoiled for choice. **4**

Contact sheet

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15 September 1959

This was the day when the first terrestrial TV in India started with its experimental telecast

Airtel Digital TV 3D ready

Bharti Airtel recently announced that its Digital HD set-top boxes are 3D ready and its network to process 3D signals is now complete



Lost in Transmission?

With so many High Definition Direct-To-Home players in the market offering a variety of packages, how do you choose 'The One'? Digit tested the HD DTH services of the six major service providers in India to tell you which is best suited for your needs.

Nimish Sawant

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Back in 1983, when India lifted the cricket World Cup, a lot of us were not even born. The only recall, that most of us have of that event, is the grainy footage of Kapil Dev lifting the cup. Cut to 2011, when most of us could see the perspiration on the faces of Sri Lankan players as MS Dhoni hit maximum to bring the World Cup back to India after 28 years. From

grainy footage to high definition glory, TV broadcasting in India has come a long way indeed, thanks in part to Direct-To-Home services.

Direct-to-Home (DTH, hereon) technology has transformed the way we view cable TV in India. Not only has this technology made the local cable operator monopoly a thing of the past, but it has also succeeded in bringing cable and satellite television to remote corners of the country. According to a study by Media Partners Asia, India

is poised to become the largest DTH market in the world in terms of subscribers by 2012. The projections predict 45 million subscribers by 2014. These are massive numbers for an industry that has not even completed a decade since its inception.

Just like the introduction of cable TV back in the 90s took no time to become mainstream, so has the DTH service gone from being plain vanilla to offering 3D HD goodness. The set-top box is no more just a signal

receiver, but it can also come with a digital video recording functionality which allows you to record your favourite shows, pause live TV, among other things. Last year saw the introduction of High Definition set-top boxes, capable of showing HD channels. Back then there were just two proper HD channels. Thanks to the competition between the six major DTH players where the market share gap between the top three is quite narrow – Dish TV: 26 percent; Tata Sky: 22 percent and

Airtel Digital TV: 20 percent (Source: Media Partners Asia) – HD is now being offered by majority of the players. Mainstream channels are slowly going HD as well.

Buying a DTH service today can be a nightmarish experience, thanks to the insane variety of packages on offer. You need to choose wisely, based on your needs and budget. But at the same time, you should not be swayed by tall claims. This is where we come in, to guide you to make the best choice. We will also debunk some tall claims, along the way.

We got set-top boxes from five HD-DTH service providers such as Tata Sky, Airtel, Videocon, Reliance and Sun Direct. Dish TV did not want to participate, but being India's oldest DTH provider, we felt the need to include it, and decided to buy it ourselves. So let's see which service offers the best bang for your buck.

The HD-DTH Digital Video Recorders **Tata Sky+ HD**

The user interface is slightly different from the one found on Tata Sky DTH. The blue UI is replaced by a black colour. The fonts on this user interface appear much better than other service providers, which have a lot of jagged edges. Sun Direct HD was the only other service provider with neat fonts.

The layout of the remote control is the best we have seen among all the service providers. It has large distinctly shaped buttons for certain functions, so you can blindly operate the remote control. Placement of buttons is also well thought out, with the

four-way arrow buttons in the centre, surrounded by volume and channel controllers. There are direct shortcut buttons for Guide, Showcase, Organiser and Active services. Sadly, it's not a universal remote.

Guide brings up a list of genres to ease the channel selection. You can simply select a genre and you will be shown a row which will show five channels along with the program guide. Reminders can be set and a program can be assigned to be recorded, after entering information.

The DVR on Tata Sky + HD has a 500GB hard disk which allows you to record 600+ hours of TV programming. You can record two channels at a time, but will have to watch the second channel as it will not allow you to change channels. You can watch a recorded show while two channels are recording.

You can also enter the time from which you want to play-back your recorded material which is great if you

have recorded long duration content, but missed only the latter half.

Along with recording, it offers an option called Series Link which allows you to record your favourite show every time it airs, although its implementation is still dicey with some shows being dropped from being recorded randomly.

Tata Sky gives you the option to add 50 favourite chan-

HOW WE TESTED

We setup all the necessary boxes in our test lab and hooked them up with LG 47LX9500 3D LED TV. We used this 3D TV because we had a contender which beams 3D channels. All the set top boxes were activated with the highest plan on offer on a particular DTH service, as we wanted to test all the possible features.

The total evaluation was split up into four parameters: Features, Ease of Use, Performance and Costing. We checked the features offered by all the services, as listed in our table. While testing the Ease of Use, we tested the user friendliness of the system, as this a product that any member of the family should be able to operate with ease. Layout of remote control buttons, on-screen user interface, ease of navigating, etc. was taken into account. We also noted how easy or difficult it was to make changes in the settings menu for various features on offer. Performance parameters such as quality of HD content, responsiveness of the user interface, recording performance (for HD-DVR boxes) was measured. We connected four services at a time using the 4 HDMI outs on the TV and switched between them to do a comparative quality testing. As costing plays a very important role in this category, we calculated how much it would cost to own an HD-DTH service from scratch for the first year, having all the channels offered including HD channels. This was the Total Cost of Ownership which we used to find the Best Buy winners.

For the HD Digital Video Recorders, we tested the ease of recording content, accessing recorded content, scheduling recordings of future programs, padding time before and after a recording, etc.

nels, but it can be added under one profile only. So say you are a sports fanatic and set all the sports channels as favourites, then another member in your family will have to use this same profile and

change the channel, the buffer is lost. You can also record upto 30 mins before and after the scheduled record.

Tata Sky+ HD is currently the only service offering only true high definition channels and not upscaled ones. The picture quality on the 47-inch screen we were testing it on was flawless. Although standard definition content went for a toss. We tried changing the aspect ratio to 4:3, which improved the quality marginally. Quality of the Active Services was not so great as there was a lot of pixelation on our 47-inch screen, which kills the whole experience.

Videocon d2h 3D HD DVR

The only service provider with 3D capability, Videocon has a unique offering in addition to other HD DVRs. With time we are sure the others will also catch up. In fact



Tata Sky+ HD has the most impressive features and is a great performer as a normal DTH service as well as recording. It is our Best Performer

add their favourite channels after yours. Another interesting aspect is the buffering of the present channel content. You can replay a particular scene by pressing rewind. Once you

Android and the US Army

US Army is calling Android developers to create and submit tactical Android apps using the military's CE Product Developers Kit

3.9 million units

That is the amount of Fusion APU units sold by AMD accounting for half of its laptop shipments in the past quarter

3D CONTENT

Videocon D2H is the only service offering 3D content. Of course, you will need a 3D TV to view the content. There is one Active 3D HD channel which broadcasts 3D content. We got to see some magic show from Singapore. Quality was quite decent. But frankly, how long can you view random 3D content on loop? Videocon needs to provide 3D content like 3D movies to impress. As a USP the 3D functionality is good, but then the true test will begin once we have 3D broadcast. We were not able to watch any 3D movie content being beamed from the satellite. We feel this technology on the STB is too early for the Indian market. It is pointless as well, as there is no 3D content being broadcast in India presently. Moreover, very few households have 3D TVs. It will still take some time before 3D goes mainstream as far as home viewing is concerned. One thing we absolutely hated in the 3D viewing experience was the stretching of the Videocon d2h logo across the centre of the screen. It can get very distracting.

Airtel recently announced its 3D plans while Tata Sky claims that it is "3D ready".

The user interface of d2h is very simple and somewhat boring to look at. While surfing channels you get a one line display of the currently playing program with the program guide extending to one more day. The other way to access channels is by pressing OK button on the remote control which will bring up a vertical list of channels, which you can enter individually to set reminders or to record. The Guide button takes you to a screen full of various genre of channels offered. There is a background music accompanying it, which is annoying. It has a small preview section once you select a particular genre.

We did notice some lag while changing channels similar to Dish TV Tru HD. The Menu button pulls up a menu screen on the left hand side which has direct icons for DVR, mosaic picture-in-picture (PIP), etc.. PIP gives you a visual layout of 12 different channels, while the video is running on all the screens, only the selected screen's audio will be audible.

We noticed a definite delay in populating the EPG when you select a particular genre from the Guide. As you press the down arrow key to load more channels, the EPG will still be loading unlike the quick EPG seen in Tata Sky+ HD even while channel surfing.



Videocon d2h 3D HD DVR was the only service provider which had an active 3D channel but 3D content needs to improve

You can set upto four users and have 20 channels per user. This is a great functionality as not all members in a family have the same favourite list.

Active services comprise D2h Movies, Active Games, Active Puzzle, Active Music, Direct Active, etc. Quality wise, they are strictly OK. Barring the D2h movies which is a pay channel, there isn't much to explore in this menu.

The remote control is well laid out with mild rubbery surface on the base. It has small round rubber buttons on the remote in the lower half, where as the topmost portion

has a range of shortcut keys like Active, Favourites, PIP, etc. It can control your STB as well as the TV. There is a purple button on the lower most tip of the remote which serves no purpose.

In Videocon d2h, the recording offers a variety of options such as starting or ending recording upto 30 mins earlier or later. This comes in handy when you are watching sports, like you want to hear the analyses after the football or cricket match, etc. The buffer can record upto 120 minutes ie. you can pause a live TV for upto that time. Like Tata Sky_ HD, it allows you to watch a recorded program while two programs are recording in the background.

Reliance Digital TV

Red and grey are the only prominent colours in the user interface of Reliance

channels that we were surfing did not have any data beyond a few hours on that day. The Select button opens up twelve picture-in-picture screens based on the channels. This is very similar to Videocon d2h Mosaic 12 PIP.

Getting to the genre based channel surfing option is a big pain. It does offer Favourites option. You can add upto eight profiles on Favourites, but accessing the favourite channels from the remote is a big pain. Another hitch we noticed with Reliance Digital TV was the slowing down of the user interface when we started recording. This is really bad and not desirable at all. On pressing the Interactive services button, you will have the 'Please wait, Application loading...' message on for over 10 seconds before it enters the menu. There is no option to set Reminders, which is shocking. Overall experience with the user interface was disappointing. We hope Reliance upgrades its firmware.

On live pausing, you will get an indication of the time elapsed since you have paused and then you can seek accordingly to arrive at the live timeline or just get rid of some ads that may have been recorded during a live pause.

You cannot record two programs on different channels at the same time. You will either have to stop

Reliance Digital TV had one of the most sluggish user interfaces amongst all the participants



Project Cafe

According to rumours, Nintendo's upcoming console called Project Cafe or Wii2 will have an 8-button Wii controller with a 6.2-inch screen and expected to release by October

Samsung fights back

Samsung has filed 10 lawsuits against Apple for infringing the formers mobile patents in as many as three countries

HD-DTH test

the present recording or schedule the other recording after the previous recording. It allows you to watch one channel while recording another. This is just bad for a digital video recorder, specially when its competitors are allowing that.

The remote control is well laid out with neat arrangement of navigational buttons and shortcuts. It does not take much time getting used to.

The HD- DTH players Airtel Digital TV (HD)

The user interface for this version is similar to previous ones, with white text on a black background and red colour highlighting the selected menu. The remote can broadly be divided into three sections viz.shortcuts, navigational pad and numberpad. Favourites allows you to have upto four profiles with about 15 channels in each profile just like Videocon d2h. Live button brings on the Airtel live services. We liked the 'Whats on now' option which brings up a list of genres, and on selecting a particular genre, it will enlist the programs in that genre which are playing currently. This is a unique feature offered only on Airtel.

Interactive services offered have a boring GUI which pixillates. iGoodlife has programming from NDTV Good Times which is divided into Health, Lifestyle, etc which is great for lifestyle TV enthusiasts. But we noticed that the audio starts playing while the screen is still loading for iGoodlife and iDarshan which is weird. There is no lagging between the audio and video though. Implementation of changing of audio languages is quite good.

It has some widgets, which frankly occupy considerable space on the TV and are not that good looking either. Games are also passable, nothing great there. It gives you a preview while channel surfing. We really liked ease of setting up Reminders and Favourites. You can get program information for upto a week from the moment you are watching, but electronic program guide is not impressive.

The remote control is quite well built with a range of shortcut buttons in the top half.

It offers upto three HD channels such as Nat Geo HD, Discovery HD World and Movies Now.



35 HD CHANNELS – REALLY?

The simple answer is : NO! Although Dish TV can claim 35 HD channels, the truth is that they currently offer the least amount of HD channels. What they do offer is up-scaled SD channels, or basically do the work of upscaling before transmitting, which is what your HDTV at home does for every normal SD channel anyway, in order to display it at 1080p/1080i resolutions. We're actually surprised no one has filed a PIL about this already, since it's obviously misleading to tell the public that you offer a service that you obviously do not.

Of their bouquet of HD channels,only Discovery HD World, National Geographic, Doordarshan, Travel XP HD are proper HD channels. Only "Zee Cinema HD" was marginally better picture quality than "Zee Cinema", but still obviously not 1080i HD. Also, none of the channels that Dish TV has misrepresented as HD, carry the HD tag in their logo – not even Zee TV!

Dish TV Tru HD

User interface of Dish TV TruHD is the same as its previous iterations. There was a noticeable delay on changing channels which is not desirable. One thing that we liked in the interface was that it gives you the time remaining on the present program. The main menu has a small screen to the right which gives you a small preview of the channel running in the background. It



is divided into Guide, Active Series, My Dish Space, My Stuff and Setup. Guide contains all the various genres, on entering which you will get a list of channels in that segment, along with a preview. My Stuff gives you a folder which has information regarding your Reminders and Favourites. Setup allows you to add Parental settings (basically locking/unlocking channels).



DIGITAL VIDEO RECORDING PERFORMANCE

Brand	Tata	Reliance	Videocon
Model	Tata Sky + HD	Digital TV (HD DVR)	d2h 3D HD DVR
Scores Out of 100	95.05	52.51	70.81
Recording another channel whilst watching one channel (Y/N)	Y	Y	Y
Recording multiple channels (Y/N)	Y	N	Y
Seeking on recorded material (Y/N)	Y	Y	Y
Hard Disk capacity (GB)	500	160	160
Hours of recording	625	200	200
Series Linking	Y	N	Y
Maximum review buffer (mins)	90	30	120
Max capable recording time before and after recorded programs (So 10)	7	6	7
Protection for recorded programs	Y	Y	Y
Recording directly from the program guide	Y	Y	Y
How many clicks to set series link	2	NA	4
How many clicks to set recorded program to play	2	3	3
Dedicated Record button	Y	Y	Y
Dedicated Button to take you to recorded material	Y	Y	N

Airtel Digital TV has the most value for money pricing for channels offered. This won it the Best Buy

The placement of buttons on the remote control will take a bit of getting used to. The four way arrow keys are placed very close to the Games button, many a times we accidentally pressed Games instead of the down arrow button. The down arrow button is huge trapezoid below which is the rectangular

HD-DTH COMPARISON

Brand	Tata	Reliance	Videocon	Sun	Dish TV	Airtel
Model	Tata Sky+ HD	Digital TV HD DVR	d2h 3D HD DVR	Sun Direct HD	TruHD	Airtel Digital TV (HD)
Total Cost of Ownership (1st year) (₹)	7,900	5,870	10,132	9,261	7,990	5,100
Features (Out of 20)	13.67	12.65	14.86	8.63	13.13	12.88
Ease of use (Out of 30)	18.16	14.53	18.66	13.63	18.28	20.56
Costing (Out of 20)	12.14	13.07	13.99	10.17	12.37	14.84
Performance (Out of 30)	19.5	13.78	18.03	16.81	16.59	17.53
Grand Total (Out Of 100)	63.48	54.04	65.54	49.25	60.38	65.83
Features						
On Screen Languages Offered (So 10)	6	5	6	5	5	6
Movies on Demand (no of channels)	5	17	3	2	5	2
Interactive Services offered (Y/N)	Y	Y	Y	N	Y	Y
Favourite Channel List (Y/N)	Y	Y	Y	Y	Y	Y
Parental Control (Y/N)	Y	Y	Y	Y	Y	Y
Audio Languages offered	6	2	2	NA	20	10
Sort by Genres (Y/N)	Y	Y	Y	Y	Y	Y
Preview while browsing (Y/N)	N	Y	Y	N	Y	Y
Program information (Y/N)	Y	Y	Y	Y	Y	Y
No. of True HD channels	7	3	5	9*	3	3
No. of 3D channels	0	0	1	0	0	0
Connectivity (Y/N)						
Component	Y	Y	Y	N	Y	Y
Composite	Y	Y	Y	Y	Y	Y
HDMI	Y	Y	Y	Y	Y	Y
USB / LAN / RF Out	Y / Y / Y	Y / Y / Y	Y / Y / N	Y / N / Y	Y / N / Y	Y / Y / Y
SPDIF / Optical	Y / Y	Y / N	Y / N	N / Y	N / Y	N / Y
Multiple outputs can be used at once?	Y	Y	N	Y	N	Y
Ease of use						
Remote Control (So 10)						
Build Quality	8	7	7	4	6	5.5
Layout of buttons	8	7	6.5	5	5.5	7
Button Feedback	7	7.5	6	5	7	5
Dedicated Quick Access Buttons (So 10)	6.5	7	8	6	7	8
Set To Box						
Set top box build quality	6.5	7	6.5	6	6.5	6.5
Set top box buttons (Y/N)	N	Y	Y	N	Y	Y
Universal Remote (So 10)	0	8	6	6	6	6
User Interface (So 10)						
Setting up Program Reminders	7	0	6	0	6	7
Setting up favourites (lesser steps higher score)	6	3	5	7.5	6	7
Costing						
Packages Offered	5	8	6	7	4	8
Optional / Regional / Add on packages	22	35	28	3	15	98
Total no of channels	163	174	265	149	198	197
Total cost of acquiring all channels (per month)	470	462	440	591	550	435
Cost of Set Top Box (₹)	2,590	2,590	3,990	3,690	2,990	3,090
Performance						
Maximum Resolution	1080i	1080i	1080i	1080i	1080i	1080i
Picture Quality (HD)	7.5	7.5	7.5	7	7.5	7.5
Program information (days)	4	7	7	3	4	7
Quality of EPG and information (So 10)	8	6	4	2	4	5.5
Quality of Interactive Services (So10)	6	5.5	5.5	0	5	6
UI Responsiveness (So 10)	7.5	2	6.5	6.5	5.5	6
Favourite channel groups	1	8	4	10	7	4
Support (Y/N)						
Telephone / Email / Chat	Y / Y / N	Y / Y / N	Y / N / N	Y / N / N	Y / Y / N	Y / Y / N
Billing Options						
Card / Online / Phone	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / N / Y	Y / Y / Y	Y / Y / Y

*Sun Direct HD offers four regional channels in HD out of the total

Lenovo's Honeycomb tablet?

According to a leaked company presentation, Lenovo is planning to come out with an Android 3.0 tablet sporting an IPS panel housing a Tegra 2 processor, in July

Going green in Amsterdam

Amsterdam has ordered around 125 electric vehicle charging stations to keep up with its target to eliminate internal combustion engine from its streets by 2040

HD-DTH test

Games button. It would have been great if the arrow buttons were of a distinct shape which is smaller than that of surrounding buttons.

Dish Active has around seven interactive services like Traffic Active (which is supposed to give traffic updates). This service was not working at our end and all we got was a MapMyIndia maps. Jobs Active allows you search for a job and contact the concerned person via a code number by logging onto the site or SMS the activation code. Cinema Active was quite good as it gives you the listings of movies around your location.

Sun Direct HD

Sun Direct HD is a DTH service that is quite popular in South India, which is the home of Sun TV network which owns this service. Just like Dish TV, you only get HD channels but it does not come with a digital video recorder.

The user interface is very simple and does not lag at all which we felt was a great plus point. It does not have any unnecessary graphics on the UI. The first channel you come across when you switch on the STB is the information channel which displays movie schedules, HD channels with their code numbers, and other offers on Sun Direct HD.

Most of the channels did not have any program information which was sad. There is no option to set reminders as well. Layout of the remote control is a bit uneasy though. It's great for someone who knows the channels by heart, but for most of us who channel surf, the button layout is annoying. You really have to bend your thumb to reach info and Exit buttons or to select the coloured buttons. The setup menu of the service looks quite attractive and is very easy to navigate through and make manipulations.

The Sun Direct HD watermark located on the left hand side of HD channels is distracting.

You can view photos or hear MP3 music off a USB drive by attaching it to the USB port behind which is a good feature. Now if only they had extended this functionality to videos as well, you would have a media player within the DTH box. Sun Direct HD is the only service which comes with a six month free subscription with its installation.

Verdict

Tata Sky+ HD was judged as the **Best Performer** for a host of parameters including its extremely responsive user interface. Quality of reception was flawless and it was

the only service that offered six proper HD channels along with seasonal HD channel like Set Max. Tata Sky+

HD scored the maximum in terms of features offered. Except for preview while surfing, it has all other features. Videocon is the only one offering 3D support, but unless there is 3D content like movies or TV shows being broadcast, that feature is quite useless.

Airtel Digital (HD) TV was judged as the **Best**

Brand	Phone	Website
Tata Sky	1860 425 6633	www.tatasky.com
Videocon	1800 881 1111	www.videocond2h.com www.reliancedigitaltv.com
Reliance	1800 200 9001	www.airteldigitaltv.in
Airtel	1800 102 8080	www.dishTV.com
Dish	1800 823 4929	www.sundirect.in
Sun	1800 200 7575	

functionality affected Tata Sky+ HD's tally. Videocon d2h came in second thanks to the well defined interface.

Videocon d2h 3D HD DVR was awarded the **Editor's Pick** for its consistent performance across all the four parameters against which it was tested. It stood second in terms of Performance. It also scored the second highest overall.



Sun Direct HD comes with a six month free subscription with installation but be prepared to pay a hefty price for owning all channels in the first year of operation

Buy thanks to its economical pricing for the content offered. It scored the most in the Ease of Use section, thanks to its user-friendly interface and ease of operations, but the user interface could have looked better. Tata Sky+ HD and Sun Direct HD have beautiful and simple interfaces. Absence of universal remote

Moreover, the 3D function makes your service future proof if you have a 3D TV. It lost out on the total cost of ownership factor as it does not offer any discount on the HD-DVR box like the other competitors. But we are hoping that with cut-throat competition, Videocon will have to cut costs somewhere.

As far as the best digital video recorder goes, Tata Sky+ HD was awarded the **Best Buy** thanks to the variety of recorder settings offered. The 500 GB hard disk which comes bundled with it, allows you to record more hours of SD and HD programs than the Videocon d2h and Reliance Digital HD DVR, for the same price point. **d**



Dish TV's claim of TruHD, as expected, was false. It does not have more than five true HD channels

GENRE-WISE SERVICE PROVIDER RECOMMENDATION	
English News	Tata Sky+HD
English Entertainment	Tata Sky+ HD or Reliance HD DVR
Infotainment	Airtel Digital TV (HD)
Music	Reliance HD DVR
English Movies	Tata Sky+ HD
Hindi GEC	Tata Sky+ HD or Videocon d2h or Dish TV TruHD
Sports Fanatic	Tata Sky+HD

Zoho Docs gets iPad friendly

Zoho Docs 2.0 adds support for iPad. Latest update ensures iPad users aren't left out

Grooveshark gets kicked out

Grooveshark apps dropped from App Store and Android Market. Music labels accused it of copyright violations

NVIDIA GTX 590 and XFX Radeon HD6990

The war for supremacy rages on

Gaming enthusiasts are always on the lookout for the flagship graphics card of every generation. Last generation, we had seen the balance tilting in favour of AMD which was aggressively coming out with DX 11 ready HD 5xxx series of cards.

Lately NVIDIA has more than covered lost ground, thanks to its GTX 5xx series of cards which are performing the HD 6xxx series cards. Till AMD announced its latest generation dual GPU flagship card - the HD 6990 - the only other fastest dual GPU card was its own ie. Radeon HD 5970. NVIDIA's GTX 295 was no match for the HD 5970 as was seen across benchmarks. But this time around, within two weeks of AMD's HD 6990 launch, NVIDIA announced the GTX 590, its dual-GPU answer to HD 6990. We got a chance to pit off these cards against each other. But before moving on to the performance charts, let's get some dope on the innards of the cards.

NVIDIA GTX 590 is basi-



NVIDIA GTX 590

cally made up of two GTX 580s having the GF110 architecture. So in a way multiply the specs of GTX 580 by 2 and you have the GTX 590. The clock speeds though have been reduced to 607 MHz (core clock) and 3414 MHz data rate (memory clock) to keep the temperatures under check. The card is 11-inches long and

has two 8-pin power connectors.

The XFX Radeon HD 6990 is based on two Cayman XT GPUs. The Cayman GPU was previously seen on HD 6970. So the HD 6990 is two HD 6970s and has twice the transistors, shader processors and raster operators. The HD 6990 has a BIOS switch just beside the CrossfireX connector which allows you to operate the card in factory mode (core clock: 830 MHz) in position 1 and in the unlocked mode (core clock: 880MHz) in position 2. The HD 6990 is comparatively longer at 12-inches and has two 8-pin power connectors.

Both the cards are back-

plated and have a centrally located fan section with vapour chamber based cooling for the two GPUs. Both cards come with a multi-GPU bridge.

We ran both the cards on their factory settings ie. 607 MHz for GTX 590 and 830 MHz for HD 6990. The table below explains how the cards fared against each other.

Based on performance, the NVIDIA GTX 590 edges past the HD 6990 in all our test games except *Crysis Warhead*, surprisingly. But the difference is not very prominent in most of the games except *STALKER: Call of Pripyat*. Pricing of the GTX 590



XFX Radeon HD 6990

at ₹44,250, makes us recommend it over the HD 6990 which comes at ₹48,000.

Although we know that for such cards, the pricing makes very little difference. It all boils down to what games you will be playing and at what resolutions. Above 60 fps everything is comfortably playable and with both these cards, that is a given - at the most extreme of game settings.

Nimish Sawant

Cards	XFX HD6990	NVIDIA GTX 590
Brand	XFX	NVIDIA
Model	HD 6990	GTX 590
Price (₹)	48000	44250
Score (out of 100)	84.66	88.34
Type of memory / Memory Clock (MHz)	GDDR5 / 5000	GDDR5 / 3414
Core Clock (MHz)	830	607
No. of Stream Processors	3072	1024
Memory size (MB) / Memory Interface	4096 / 512	3072 / 768
Connects on card	1xDVI, 4xmini DisplayPort	3xDVI, 1x mini
Synthetic Benchmarks		
3D Mark 11 (Overall)	8476	8264
Unigine Heaven v2.1 (1920x1080, 4xAF, Max Shader, Extreme Tesellation) Score	1615	1840
Unigine Heaven v2.1 (1920x1080, 4xAF, Max Shader, Extreme Tesellation) Frame rate	64.1	73
Temperature (Load)	84	81
Game Benchmarks		
FarCry 2 (1680x1050, Ultra High, 8xAA) Avg	132.45	133.35
FarCry 2 (1920x1080, Ultra High, 8xAA) Avg	130.94	131.22
S.T.A.L.K.E.R : Call of Pripyat (Day, 1680x1050, 4xAA, DX11, Ultra Detail) Avg	125.6	142.5
S.T.A.L.K.E.R : Call of Pripyat (Day, 1920x1080, 4xAA, DX11, Ultra Detail) Avg	116.1	134.3
Resident Evil (1680x1050, 8xAA, Motion Blur on)	116.6	124.6
Resident Evil (1920x1080, 8xAA, Motion Blur on)	110.9	120
Crysis Warhead (1920x1080, DX10, Very High) Avg	56	52
Crysis Warhead (1920x1080, DX10, Very High With Tweaks) Avg	55	51
Ratings		
Features	8.5	8
Performance	8	8.5
Build Quality	8	8
Value for money	7	7
Overall	8	8

3.61 million

The 3DS is doing well with 3.61 million devices being sold contrasting with the sale of Wii which is down to 15 million from 20 million last year

New radio wave technique

Scientists at the University of Leicester have discovered a new technique to detect alien planets by looking at radio waves emitted by ultraviolet flares on planets

Bazaar

Canon S95

Low-light performer with RAW support

The Canon Powershot S95 is an advanced compact point-and-shoot digital camera, promising to offer great low-light shooting and a host of manual controls. The key differentiators for the Canon S95 lay in the 10MP CCD image sensor and the lens that it incorporates. With a sensor size of 1/1.7 inch vs the standard sensor size of 1/2.5 inch found in most other compact digital cameras, the Powershot S95 has a clear edge in terms of image quality. Coupled with the larger sensor is a bright F2.0, 28-105 mm lens. Here again, with the lens aperture being F2.0 at 28 mm, the S95 promises faster performance in low-light situations.

The S95 is fairly loaded with



features such as wide angle lens (28 mm), HD video recording at 24 fps, hybrid image stabilisation, RAW shooting mode, a 3.0-inch LCD, HDMI connectivity and a control ring to toggle settings such as ISO, shutter speed and aperture. It does miss out on some of the latest features like geo-tagging and wireless controls. Usability and design is one of its strengths, with a metal body and robust, high-quality construction, the S95 feels very secure and solid. The interface and controls are

well implemented, ensuring flexibility and intuitive operation across all shooting modes. In our performance tests, the Canon S95 did a commendable job with crisp images along with accurate colour saturation in most test scenes. The biggest advantage was seen in low-light shooting, ISO400 shots had minimal noise and we were even able to capture fairly good images at ISO800 with very little noise.

So, is the Canon S95 a good buy? Yes, especially if you are looking for a compact point-and-shoot that will not falter in low-light and offer full manual mode with RAW support. What comes in the way of what is otherwise an excellent product, is its price tag - the Canon S95 is over-priced.

Sobam Raninga

Specifications

Sensor: 10.4 megapixels
ISO range: 80 - 3200
Screen: 3.0 inch,
461000 pixels
Optical zoom: 3.8x
Video recording: HD
1280x720@24fps

Contact

Canon India Private Limited

Phone: 1800-345-33-66

Email: info@canon.co.in

Web site: www.canon.co.in

Price: ₹26,995

7.5
10

Features.....	8.0
Performance.....	8.0
Build.....	8.5
Value for money	5.0

Specifications

12.3MP CMOS sensor;
ISO Range:100 to 6400;
Image stabilization; CF/
DC dual slot; Battery: 1620
BLM-5 Lithium ion

Contact

Olympus Imaging India Pvt.

Ltd.

Email: srivastava_kriti@
olympus.in

Web site: www.olympus-
imaging.co.in

Price: ₹84,995

Warranty: 2 years

6.5
10

Features.....	7.0
Performance.....	7.0
Build.....	7.5
Value for money	6.0

Olympus E-5

12.3 MP Four-Thirds DSLR camera

Solidly built, the E-5 has a good grip and feel, also borrows some electronic features from its smaller Micro Four Thirds brethren.

It delivers great image quality in good light, especially at high ISO settings. Images have good contrast, low noise and spot-on colour accuracy, with AWB up to the task under most conditions. Above ISO 800 however, sharpness and noise levels suffer in low light, and above ISO 1600, fine details suffer. Some highlight clipping also occurs in high-contrast scenes, avoidable if using RAW format. Default sharpness is a bit soft,

however, this can be adjusted in the menu. Video quality (720p) is also good, with good sharpness and colour accuracy, fast AF, as well as no jerks.

Continuous drive is not up to the mark, with variable 5 fps not good enough. The AF system is very fast though.

Its 1620 mAh BLM-5 battery life is quite solid, rated to last up to 870 shots. The menus and control system are far from perfect, and much fewer options are available compared to other DSLRs in this price category.



At its price range, the Olympus E-5 has superior competition in the form

of the Nikon D7000 and the Canon EOS 7D, which are more versatile cameras, but in terms of specifications, the E-5 is probably closer to the D300s and the Canon EOS 50D. As for performance and price, the E-5 doesn't compare well with its competitors, but is a solid upgrade from the Olympus E3 or E1, especially if you have a Zuiko Digital lens with you.

Abhinav Lal

Xbox and PS fans have to wait

According to reports, Microsoft and Sony do not plan to release their follow-ups to Xbox 360 and PS3, respectively, till 2014

Nook makeover

After modders ported android onto the Nook Color to unlock features like proper web browsing, now, B&N itself pushed it to Android 2.2 in the latest update.

Dell Venue

Sluggish beauty

The Venue is essentially Dell's second stab at the Android smartphone market, after the huge Streak. The front panel of the phone has the 4.1-inch display flanked by the glossy black coloured finish. The touch-based keys are placed below the screen. The stripe of chrome along both side panels gives the phone a classy feel.

The Venue is powered by the combination of the Qualcomm's Scorpion processor clocking at 1 GHz, Qualcomm QSD8520 chipset and the Adreno 200 GPU. Android 2.2 is preinstalled, but no real clarity out the Android 2.3 upgrade. Like other Android smartphone manufacturers, Dell has its own unique skin

wrapped around the Venue - the StageUI.

Despite being powered by a 1 GHz processor, there is a bit of lag in the menu scroll. On the 4.1-inch screen most images tend to throw up a bit of gradation in certain colours. The touch response is fantastic. The on-screen keypad is extremely well spaced out, both in the portrait and the landscape mode. However, the screen needs a higher resolution.

Funnily enough, in the mail application, we could not attach anything except a photograph to an email we wished to send.

The call quality offered by the Venue

is extremely good. However, the audio does tend to break quite a bit if the signal strength goes below 50 percent.

The images from the 8 MP camera are clear, as long as the ambient lighting is good. The 720p videos are smooth, with no visible jerk. However, the camera does have some shutter lag.

It has an impressive two day battery life. For just under ₹30,000 it is on the expensive side, particularly if you look at rivals such as HTC Desire HD, HTC Desire Z and the slightly ageing, yet very brilliant, Samsung Galaxy S, with the S-LCD.

Visbal Mathur



Specifications

Qualcomm Scorpion processor @ 1GHz, quad band GSM network, 3G capable, 4.1 inch AMOLED touch-screen, Gorilla Glass type, 480x800 resolution, 8MP camera with 720p HD video, Android 2.2 (Froyo), microSD card slot (up to 32GB)

Contact

Dell India

Phone: 1800-425-4026 / 080-2506-8026

Web site: www.dell.co.in

Price: ₹29,990

7.0
10

Features.....7.5
Performance.....6.0
Build.....8.5
Value for money.....5.5

Specifications

HD Media player; HDMI 1.3; Full HD resolution (1920x1080 pixels); HDMI video out; Component and Composite out; 2 USB inputs; Memory card reader; Built-in LAN capabilities; Picasa and Flickr access; Built-in Online Radio app

Contact

Aditya Infotech Pvt. Ltd

Phone: 0120-4555666

Web site: www.avermedia.com

Price: ₹5,500

7.0
10

Features.....7.5
Performance.....6.5
Build.....7.5
Value for money.....7.0

AverMedia HD Studio

For that theater, at home

Straight out of the box, the AverLife HD Studio immediately impresses with the extremely classy looks. In terms of size, this one is slightly thinner than the WD Live, but pretty much same in the width and depth.

The AverLife HD studio interface is pretty slick to use, the combination of sufficiently big icons and text works well. The home screen is laid out horizontally, while the rest of the menu is vertical.

Video playback starts up in a couple of seconds. Depending on the resolution you have set the media player to (480p, 576p, 720p, 1080i or 1080p), the video

will be upscaled to that resolution, depending on the requirement. What the AverLife HD Studio lacks is the 8-bit and 12-bit colour depth option that is available in the WD Live. The upscale was very good, without any extra artifacts making their way on to the image. Sharpness was retained, but a bit of colour gradation was visible in black colour portions, when upscaling a SD video file full 1080p. However when upscaling a native HD video to full 1080p resolution, there was no

such problem. This media player played back all video formats we threw at it.

Button layout on the remote is bad. It has a LAN port which allows it to be connected to widgets such as a built-in online radio app, Flickr, Picasa and can access and share files over network connected storage.

At a price of ₹5,500, the availability of a memory card reader is a value add. The remote is a huge disappointment, however.

Visbal Mathur



HP Veer to launch in May

The 2.2-inch smartphone Veer from HP sporting the webOS 2.2 is expected to launch on May 2

<http://bit.ly/flvN2Y>

Head here for an in-depth review on ASUS E35M1-I Deluxe board

Bazaar

Dell Venue Pro

A second sighting

This is only the second WP7 phone that we've reviewed, the HTC HD 7 being the first. The Venue Pro is a large, heavy (192 grams) phone, and feels thicker owing to a concave display. The screen is touted as gorilla glass, but picked up scratches. The top and bottom of the phone are wedge-shaped and with the chrome-rimmed 3.5mm jack adds some style. The bottom slideout QWERTY is about the sexiest form factor ever, and the mechanism is quite slick. The battery cover is glossy, a shame since we loved the matte one on the Dell Venue.

We're not going to get into the benefits and pitfalls of WP7, for they alone could span several

pages, but for normal consumer (as opposed to corporates), the Venue Pro has a few serious limitations – Bluetooth transfers, OS X connectivity to name a couple. We also had issues pairing with a couple of Bluetooth headsets that were on hand. Then there were Venue Pro-specific issues – like our test SIM getting locked without a password or the Internet refusing to work after disabling and re-enabling data connections – an issue that a restart finally resolved. The display is advertised as AMOLED, and while the blackness level is good, and the colours are better



than the Dell Venue, we still find the contrast slightly lacking. Sunlight legibility remains poor. The QWERTY keypad is a plus. The touchscreen is very sensitive, and the on-screen keypad works flawlessly. The Venue Pro is a reasonably speedy phone and we faced no slowdowns despite the fact that it runs a somewhat ageing SoC (Qualcomm QSD8250).

The Venue Pro is a good attempt from Dell, especially given their relatively short time in market with smartphones, and if you're looking for a WP7 device with a good QWERTY, this is a viable option.

Michael Browne

Specifications

Display: 4.1-inches, 480 x 800 pixels; OS: Windows Phone 7; SoC: Qualcomm QSD8250; RAM: 512 MB; inbuilt storage: 8 GB, micro SD expandable; battery: 1400 mAh; weight: 192.8 grams

Contact

Dell India

Phone: 1800-425-4026

Web site: www.dell.co.in

Price: ₹34,990 (MRP, 8 GB)

7.0
10

Features.....	7.0
Performance.....	7.0
Build.....	7.0
Value for money.....	6.0

ASUS E35M1-I Deluxe

Feature-rich option for an HTPC setup

Specifications

Processor: AMD E350;
Graphics: Radeon HD6310;
RAM: upto 8 GB DDR3;
Integrated WiFi Present

Contact

ASUS Technology Pvt. Ltd.

Phone: 18002090365

Email: reachus@asus.com

Web site: www.asus.in

Price: ₹10,750

After testing the Gigabyte GA E350N a month back, it was interesting to get our hands on ASUS's E35M1-I Deluxe board this time around. It has two interesting additions over the GA E350N in the form of an internal 802.11n WiFi adapter and a bluetooth 3.0 adapter on the back I/O panel.

A major portion of the board is covered by a passive heatsink which has numerous fins for faster cooling. Although we did find the temperatures rising to about 60 degrees. The Turbo Key II jumper setting allows easy overclocking, although we

don't really see a major performance difference on such a low end APU.

Performance-wise it gave an overall PC Mark Vantage score of 2553 (slightly higher than GA E350N) and Cinebench R10 rendering was at par with GA E350N. Most of the real world tests like DivX encoding, WinRAR compression gave the same scores. File transfer was faster on the ASUS board.

Gaming, using only the AMD HD 6310 graphics solution will give playable frame rates only on lowering the resolutions. Company Of Heroes : Tales of Valor gave 50 fps at 1024x768, Low setting. For decent gaming, you will



need an external graphics card. HD playback was flawless and we did not notice any stutter or skipping.

At ₹10,750 it is priced higher than the Gigabyte E350N, but it does sport some additional features like integrated WiFi adapter, a PCIe x16 slot and a bluetooth adapter. Product comes recommended around the ₹8,000 price point.

Nimish Sawant

7.0
10

Features.....	8.5
Performance.....	6.5
Build.....	7.0
Value for money.....	5.5

More cloud music

Reports suggest Apple has signed Warner Music in preparation for its upcoming streaming iTunes service

Where's the million?

Facebook calls user a 'spammer'. User sues Facebook for \$1. Shouldn't it be \$1 million ?!

HTC Desire Z

When Z means a keypad

The Desire was one of HTC's most popular models that faced criticism on account of its plastic body and the lack of a dedicated keypad. The Desire Z addresses both these shortcomings, and although this section of the Android market is a lot busier than during the Desire days, the Desire Z stands out as a well-rounded device.

Built of metal with plastic bits, the Desire Z is heavy, at 180 grams, and has a rather plain silver and grey colour scheme. The QWERTY keypad doesn't slide out, rather it has a hinge system that reveals the keypad when lifted – we question the longevity of this mechanism. The S-LCD first seen on the Desire makes a comeback, although the menu keys are capacitive-touch

this time, with uneven lighting that detracts from the quality feel of the handset. The on-screen keypad is sensitive, but in portrait mode you will find it a bit cramped.

The hardware QWERTY also deserves mention for the wrong reasons – keys are small, feedback is hard and rubbery and the layout isn't the best we've seen – as a result it's not very usable, and we found the onscreen keypad in landscape mode to be a better bet.

Reception and call clarity tests are a breeze, as is handsfree and loudspeaker volume, although the latter is too tinny for music. The Desire Z has a very nice camera, although its only 5 MP; it produces crisp images with good colour and very decent highlighting. The phone is quick enough, but at times



we found it a bit sluggish compared to a Desire HD that runs faster hardware. Battery life is decent.

Our major gripe with the Desire Z would be its flawed QWERTY keypad. Other than that, it's a good phone, although for the price there are newer handsets around. With dual cores on the way, we're also beginning to wonder about future proofing. With the release of handsets like the Incredible S, the Desire Z with its flawed keypad loses a good bit of its charm.

Michael Browne

Specifications

Display: 3.7-inches, 480 x 800 pixels; OS: Android 2.2; SoC: Qualcomm MSM 7230; RAM: 512 MB; memory expansion: microSD; battery: 1300 mAh; Weight: 180 grams

Contact

Bright Point India

Phone: 9910821100

Email: nitin.pandita@brightpoint.com

Web site: www.htc.com/in

Price: ₹25,590

7.0
10

Features 7.5
Performance 7.0
Build 7.5
Value for money 7.0

Specifications

display size: 17-inches, resolution: 1920 x 1080 pixels; CPU: Core i5 480M; RAM: 4 GB DDR3 1333 MHz; GPU: Radeon HD 5850M; HDD: 640 GB, 7,200 rpm; Weight: 3.41 kgs

Contact

HP India Pvt. Ltd.

Phone: 1-800-425-4999

Web site: www.hp.com

Price: ₹93,550 + tax (MRP)

7.0
10

Features 7.5
Performance 7.0
Build 7.0
Value for money 5.5

HP Envy 3D 17

Owners Envy, or owners pride?

The 17-inch, 3D-ready Envy is HP's answer to the Alienware threat. While large, and heavy, the Envy is attractive, and imbued with liberal doses of metal. The inside also has metal, and is satin-finished, not glossy – a relief, although the display is reflection prone. The keypad is

well spaced out and the keys nice, the trackpad is reasonably sensitive, though for gaming, you'd be daft not to consider a mouse.

3D support is at hand, and glasses are bundled, and it works well on the bundled demo content with good colour, and depth being salient highlights, unlike some 3D TVs we've seen that fail. However, we couldn't get 3D working on the games.

Hardcore gamers will want to get more than 27.16 fps in Crysis Warhead (1280 x 1024, no AA), though at 51.6 fps in Call Of Pripyat at identical settings in

DX11 mode. Certainly it's more than up for most popular online games like World Of Warcraft and Counterstrike. Note that the HD 5850 gets very hot, with temperatures crossing 90 degrees when gaming, particularly if the venting holes are blocked, if it were to be used on a soft surface.

The price tag of ₹93,550 plus taxes is a high one to pay even for a gaming setup that boasts of 3D viewing. While the Envy isn't exactly great value for money, or the best performing notebook out there, it is the cheapest 3D-capable notebook at the moment.

Michael Browne



Bird's eye view

Check out 45 stunning shots taken by employing a special technique of capturing photographs from an elevated location: <http://bit.ly/digitcam2>

Cam security

Learn how to turn a web-cam into a security camera. All you need is Yawcam software and some other stuff: <http://bit.ly/digitcam3>

Bazaar

HTC Desire HD

A fading flagship

The Desire HD is HTC's flagship touchscreen-only Android device, with a 4.3-inch display, and an aluminium unibody. The front is one plain of glass, with beautifully lit capacitive touch buttons beneath the display. Like the Desire Z, the slight gap between display glass and aluminium bezel collects dust particles – super annoying. No gorilla goodness here – the display is also scratch-prone so watch it with those keys.

The display is crisp, but colours and contrast could

use some boosting – we'd have loved at least an S-LCD if not a more exotic AMOLED display. The capacitive touchscreen is super sensitive. Typing on the onscreen keypad is a good experience – keys are well laid out with adequate spacing – much better than 3.7-inch displays. The battery rated at 1,230 mAh is inadequate, but not horribly so, enough for a day of light to moderate usage on a single charge.

The phone itself is snappy and responsive owing to a faster CPU and more RAM than the Desire Z. Call quality is very good, as is in-call volume of

the earpiece and loudspeaker. The loudspeaker is pretty loud for music, but tinny and directional. The handsfree offers good quality for both calls and music, but we'd like an in-ear unit. The Desire HD has a good camera, and powerful flash – pictures have very good detail, and good colour, though there is a tendency to overexpose on auto settings. Video shooting quality is also good for a cellphone camera, except with dim lighting.

At ₹26,990 (MRP), it's cheaper than the Arc, and not at all worse for it. A good phone for the price, but with a bunch of tantalising options on the horizon, we reckon you wait and watch a bit.

Michael Browne



Specifications

screen size: 4.3-inches; resolution: 480 x 800 pixels; OS: Android 2.2; SoC: Qualcomm MSM8255; RAM: 768 MB; memory expansion: microSD; battery: 1,230 mAh; weight: 164 grams

Contact

Bright Point India

Phone: 9910821100

Email: nitin.pandita@brightpoint.com

Web site: www.htc.com/in

Price: ₹26,990 (MRP)

7.5/10

Features.....7.5
Performance.....8.0
Build.....7.5
Value for money7.0

CONTACT DETAILS FOR PRODUCTS IN BAZAAR MINI

Contact	Product	Price	Phone	Email	Website
Buffalo Technology Inc	Buffalo Link Station Pro	₹8500/-	+91 11 4153 8059	info-india@melcoinc.co.jp	www.buffalo-asia.com
Techcom India	TechCom SSD 3300	₹1550	+91 22 2642 8541	techcom@airtelmail.in	www.techcomindia.com
Aditya Infotech Ltd.	ZOTAC GTX 550 Ti	₹9990	0120-4555666	sales@aditygroup.com	www.zotac.com
Abacus Peripherals Pvt Ltd	Palit GTX 550 Ti	₹9,490	1800 22 1988	enquiry@abacusperipherals.com	www.abacusperipherals.com
MSI India	MSI N550 GTX Ti	₹9,700	+91 11 4175 8808	bishakhadas@msi.com	www.msi.com
MSI India	MSI R6850	₹13,500	+91 11 41758 808	bishakhadas@msi.com	www.msi.com
Fortune Marketing	Seagate Barracuda XT 3 TB	₹14,900/- + Tax	+91 11 2641 4468	Sales@fortune-it.com	www.seagate.com
Kingston Technology	Kingston HyperX USB3.0	₹6299	+91 22 4223 0300	sales_india@kingston.com	www.kingston.com/india
HCL Infosystems Ltd.	HCL ME M54	₹39,900	+91120 420 3122	talk2me@hcl.in	www.hclinfosystems.com
Jabra	Jabra Wave	₹3,899.00	NA	echou@gn.com	www.jabra.com
Lava International Ltd	Lava B8	₹5,299.00	+91 120 4637 333	NA	www.lavamobiles.com
Kye Genius	Genius GHP-400S	₹680	+91 44 4208 8250	sales_india@geniusnet.com	www.geniusnet.com
Amkette India	Amkette Air	₹949	1800 119 090	techsupport@amkette.com	www.amkette.com
Plantronics India	Plantronics M100	₹4,199	1800 102 1064	NA	www.plantronics.in
Hewlett-Packard India Sales Pvt. Ltd.	HP LaserJet M1136	₹3460/-	1800 425 4999	NA	www.hp.com
Soho Exim Pvt Ltd	Apacer AC 230	₹7,399	+91 9654338987	brajaa@shaihouse.com	www.apacer.com
Micromax	Micromax M2	₹4,500.00	+91 124 4009 600	info@micromaxinfo.com	www.micromaxmaxinfo.com
Nokia India	Nokia X3-02	₹8,839	+91 22 30303838	NA	www.nokia.co.in

Bazaar

mini

QUICK
INSIGHTS
FROM INDEPTH
TESTS

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests, and are finally given a verdict. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and in the case of software even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score

1.0 - 3.0 - Extremely poor product. Keep away!

3.5 - 5.0 - Strictly OK. Not recommended

5.5 - 6.5 - Decent product. Go for it, but there maybe better products.

7.0 - 8.5 - Very good product. Highly recommended.

9.0-10.0 - Ground-breaking product. We've never seen anything like it before. A definite must buy!



Drop in S-LCD funding

The flat-screen joint venture between Sony and Samsung ie S-LCD will face a cut in capital by \$555 mn as Sony faces losses in TV business and Samsung is concentrating on AMOLED technology

NAS



Buffalo Link Station Pro

Price: ₹12,500

SPEAKER



TechCom SSD 3300

Price: ₹1,550

SPECIFICATIONS

Capacity 1 TB
BitTorrent support..... Y
USB Port..... Y

Channel..... 2.1
Output Power 20W + 10Wx2
Sources..... Aux-in, SD card, USB drive

TEST CENTRE RATINGS (All Scores out of 10)

Features..... 7.0

It has a BitTorrent download support and is DLNA certified. Comes with a 1.6GHz processor for smooth performance.

Performance 7.5

Read speeds were impressive at 65 MB/s (sequential) and 40 MB/s (assorted). Wireless full HD streaming was flawless in same room.

Build quality 7.0

Build quality is quite sturdy but the glossy plastic is a dust magnet.

Value for money 6.0

At ₹12,500 it is a bit on the higher side.

Features..... 6.5

It has a two digit LED display with dedicated four way button controls. Has USB port, an SD card slot and FM support.

Performance 6.0

Not good with lower frequencies. Its strength lies in mid-frequencies. At higher frequencies we found the instrument and vocals' separation lacking.

Build quality 5.5

Sub-woofer section is wooden with plastic satellites.

Value for money 8.0

TechCom SSD 3300FM is priced at a very economical ₹1550.

WE SAY

7.0

Buffalo Link Station Pro is just two connectors short of an HD media player with NAS capabilities. It has great features like BitTorrent support, compatibility with Mac and PC, iPhone/iPad app support which allows you to access your data on a Buffalo app. Wireless streaming performance is subject to your router strength, but for our test purpose, the streaming in the same room was quite flawless. It has good mix of features which adds value. Under ₹9,000 we would highly recommend the product.

6.5

Its performance is definitely better than the SSD3200FM and does not throw up any issues for most of the tracks played, unless they constitute very low frequency notes. Frequency sweep test was poor in the lower and higher end of the frequency spectrum. This product is meant to be enjoyed at the mid frequencies and it does a good job of it. Only thing we felt could have been improved was placing the drivers in the satellites at an angle towards the ear. Remote control has pleasant layout and responsive buttons.

GTX 550Ti Shootout

Read our detailed comparison of these cards on www.thinkdigit.com. Go to <http://bit.ly/i3dYwY>

Did you know?

The Catalyst 11.4 Early Preview driver from AMD is supposed to offer a 12 to 70 % performance boost in 6800 cards. Get it from: <http://bit.ly/dSrerk>

Bazaar mini

GRAPHICS CARD



ZOTAC GTX 550 Ti AMP! Edition

Price: ₹9,990



Palit GTX 550 Ti Sonic

Price: ₹9,490



MSI N550GTX-Ti Cyclone II

Price : ₹9,700



MSI R6850 Cyclone Power Edition

Price : ₹13,500

SPECIFICATIONS

Core clock.....1000 MHz
Memory Clock.....1100 MHz
Memory Interface.....192-bit
Cuda Cores.....192

Core clock.....1000 MHz
Memory Clock.....1100 MHz
Memory Interface.....192-bit
Cuda Cores.....192

Core clock.....950 MHz
Memory Clock.....1026 MHz
Memory Interface.....192-bit
Cuda Cores.....192

Core clock.....860 MHz
Memory Clock.....1100 MHz
Memory Interface.....256-bit
Stream Processors.....960

TEST CENTRE RATINGS (All Scores out of 10)

Features.....7.0
Factory overclocked core clock by 100 MHz and memory clock by 74 MHz.

Performance7.5
The fastest performer amongst the GTX 550 Ti cards though by only a small margin. FarCry 2 (1280x1024, Ultra High, 4xAA): 81.43 FPS. Load temp: 65 degrees.

Build quality7.5
Sturdily built exactly like the GTX 560Ti we'd reviewed sometime back.

Value for money.....6.5
The most expensive amongst the GTX 550 Ti's we received.

Features.....7.0
Exactly the same overclock speed as the ZOTAC card. Comes with a DVI, HDMI and a VGA port

Performance7.5
Overall performance is just about 0.19 percent lesser than the ZOTAC card. FarCry 2 (1280x1024, Ultra High, 4xAA): 81.5 FPS. Load temp: 67 degrees.

Build quality7.0
Not much to complain about the build quality. The card is airy enough.

Value for money.....7.5
The most value for money of the three GTX 550 Ti cards.

Features.....6.5
Not as souped up as the other two 550Ti cards here. Core clock is upped by only 50 MHz.

Performance7.0
The MSI 550 Ti is clocked lower and hence performs a little less. FarCry 2 (1280x1024, Ultra High, 4xAA): 78.32 FPS. Load temp: 45 degrees.

Build Quality.....7.5
Flamboyant, with it's Cyclone heat sink and the propeller blade inspired design.

Value for money.....6.5
We'd give this one a slightly lower score on this parameter.

Features.....7.0
Factory overclocked by 85 MHz on the core clock and 100MHz on memory clock.

Performance7.0
The performance is impressive - FarCry 2 (1280x1024, Ultra High, 4xAA): 85.29, 1920x1080: 78.32. The card is at par with GTX 460s we've tested before.

Build Quality.....7.5
Cyclone heat sink attempts to dissipate heat via two heat pipes enclosed in fins. Good build.

Value for money.....7.0
For a HD 6850 this card is priced a little on the higher side.

WE SAY

7.0

The GTX 550 Ti is built around the GF116 chip which first debuted as the GF106 chip for the GTS 450. The card looks snazzy and very much like the 560 Ti AMP. They are architecturally the same, but the difference between the two is that for the GTX 550 Ti, it's fully unlocked in terms of ROPs, and memory controllers. You now get a higher clock, higher RAM and enhanced memory interface over the GTS 450. The ZOTAC GTX 550 Ti is a good performer with a slight premium on price. It comes with 2 DVI ports, an HDMI port and oddly enough a display port.

7.0

This is quite an overclocked card and hence expectedly gives good performance. It returned a 3D Mark Vantage overall score of 13601 and a GPU score of 10965. We can safely say that the ZOTAC and Palit cards are almost exactly the same since they're factory overclocked to the same extent. Yet this one is a little cheaper and hence the most value for money GTX 550 Ti. In terms of construction, looks are a little kiddish though. Among the three GTX 550Ti's featured here Palit GTX 550 Ti Sonic emerged as the best value for money card.

6.5

One of the most important factors about this card was that it ran considerably cooler; about 10 degrees. The other two in the race, ZOTAC 550 Ti Amp, and Palit 550 Ti Sonic being more overclocked were hotter clocking 65 to 67 degrees at peak load. Considering the MSI card ran cooler by quite a large margin, it wouldn't be too much of a stretch to imagine overclocking it a great deal. Especially since Afterburner, MSI's overclocking utility, came bundled with it. The fan is supposed to be propeller blade inspired resulting in 20 percent more airflow.

7.0

The card obviously whoops the GTX 550 Ti's featured alongside. We got a 3D Mark Vantage overall score of 15440 and a GPU score of 14388. But then this card is more in the league of GTX 460s. This particular release of the HD 6850 bears the Power Edition tag. This means that by using the MSI Afterburner overclocking tool you'll be able to raise not just core voltage but also up the Memory and AUX voltage. Although priced on the higher side, the factory overclock, fancy cooling, and being a power edition may just about justify the price.

Using spare pen drive

Top 10 uses for a spare pen drive including spy drive, time capsule, etc
<http://lifehack.kr/flflxb>

Space Travel

SpaceX founder Elon Musk has said that he will send man to Mars in the next two decades

INTERNAL HDD



Seagate Barracuda XT 3TB

Price: ₹ 14,990

PORTABLE DRIVE



Kingston HyperX USB3.0 64 GB

Price: ₹6,299

BLUETOOTH HEADSET



Jabra Wave

Price: ₹3,899

LAPTOP



HCL ME ICON M54

Price : ₹39,900

SPECIFICATIONS

Capacity.....3TB
 Interface.....SATA 3
 Cache Buffer.....64MB
 Rotational Speed.....7200rpm

Capacity.....64GB
 Interface.....USB 3.0
 Power consumption.....4.5W
 Dimensions (WxDxH in mm)118.6 x 73.5 x 12

Bluetooth version.....2.1 +EDR
 Weight.....13 grams
 Talktime.....6 hrs
 Standby time.....8 days

Processor.....Intel Core i5 520M
 Graphics solution.....Intel HD
 RAM.....4 GB DDR3
 Dedicated WiFi button.....Yes

TEST CENTRE RATINGS (All Scores out of 10)

Features.....8.0

It has a SATA 3 interface and supports legacy 512-byte sector. Disc Wizard utility is bundled to overcome the 2.1TB limit issue.

Performance.....8.0

Impressive performance, was much better than WD Caviar Green 3 TB drive. Sequential Read / Write (MB/s): 117 / 104; Assorted Read / Write (MB/s): 86 / 99.

Build quality.....7.5

Like all HDDs this one comes with a very strong build quality as well.

Value for money.....6.5

At ₹14,900 this drive is priced on the higher end of the spectrum.

Features.....7.0

It is a 64GB solid state drive connected to a SATA to USB 3.0 interface making an SSD portable.

Performance.....8.5

It gave a brilliant transfer speeds. Sequential Read / Write (MB/s): 108 / 106 and Assorted Read / Write (MB/s): 78.57 / 64.

Build quality.....8.0

Very strong build quality thanks to the anodized blue metal covering.

Value for money.....5.0

At ₹6,299 for 64GB it is expensive for a recommendation.

Features.....7.0

Capable of simultaneous pairing with up to 2 devices, and up to 8 devices in total, the Wave is pretty easy to use.

Performance.....7.5

As long as you have a clear line of sight, the Wave performs well up to a distance of 9 feet, with a bit of distortion creeping in beyond that.

Build Quality.....7.5

It is sleek but could have been slimmer otherwise quite well built.

Value for money.....7.0

Price comparable to similar products, though not excellent VFM.

Features.....6.5

Houses a Core i5-520M processor. Has a finger print scanner, dedicated buttons for WiFi and a trackpad with a multimedia mode.

Performance.....6.0

PC Mark Vantage: 3885; DivX Encoding (100MB file): 49 secs; Data Transfer: around 30 MB/s; HD experience could have been better.

Build Quality.....6.5

Contemporary responsive keypad. Glossy surface - dust magnet.

Value for money.....6.5

At ₹39,900 it is very decently priced for its performance.

WE SAY

7.5

The drive is very fast, the write speeds were about 20 MB/s faster than the WD Caviar Green 3 TB drive, but we would rather compare with WD's 3TB Black edition (whenever that releases). It is priced at a hefty premium, as apart from being fast it also allows those using older rigs running Windows XP to use the complete 3TB capacity, using the Disc Wizard utility. This is not possible with WD 3TB drive which uses advanced 4K sector. Ideally meant for performance enthusiasts, who want a fast, large capacity drive. For someone looking purely at storage, can go for the WD 3TB which is ₹4,000 lower.

7.0

Kingston HyperX USB3.0 combines the great aspects of USB 3.0 and an SSD. If raw speed is what you are looking for, then this is the portable drive to go for. Its performance was miles ahead of standard USB 3.0 portable drives such as Apacer AC230, Iomega eGo portable, etc. using standard 2.5-inch drives, which were hovering somewhere in the 70-75MB/s region for sequential read and write. You can also use it in the USB 2.0 mode (although we doubt anyone would do that). For the price, we were expecting the capacity to be a little larger. But impressive product nonetheless.

7.5

The Wave is a good Bluetooth handset for those who are looking for something to use with two phones. It's quite rugged, and looks pretty nice, though we'd have liked it to be a bit slimmer, and perhaps, marginally lighter. Still, it performs well, and does everything it's advertised to do. With a wooden partition, it needs to be around 4-5 feet away from your handset to perform reasonably. Voice tones and volume levels are pretty good. There are sleeker devices like the Plantronics Discovery 975 around though you will pay a bit more for the shrinking form factor.

6.5

One feature on the laptop that left us mighty impressed was the multi-utility trackpad. Display Mate tests gave a wonderful response and we did not find any colour tinge in the black to white transition. The 256 colour ramp was quite even. We did not find the full HD experience very fulfilling, as there was a lot of noticeable distortion. The reflective screen does not help matters, as your background is reflected in completely dark scenes. Battery lasted for a under 2.5 hours which is quite a low reading. Ideal for college students who will have a power connection handy.

Dropbox alternative?

AVG launched LiveKive backup and sync tool, to rival Dropbox

Opera's battery saving feature

Opera includes some laptop battery saving features in browser's 11.10 Release Candidate

Bazaar mini

PRINTER



HP LaserJet M1136
Price: ₹10,499

HEAD PHONES



Genius GHP-400S
Price: ₹680

MOUSE



Amkette Air
Price: ₹949

BLUETOOTH HEADSET



Plantronics M100
Price: ₹4,199

SPECIFICATIONS

Resolution: 600x600 dpi; Duplex printing; Manual; Dimensions (WxDxH in mm): 415x265x306

Sensitivity: 107 dB; Impedance: 32 ohm; Cord Length: 1.5m; Type: Supra-aural

Wireless mouse; USB 2.0 based; Nano-sized receiver; 2.4GHz frequency; 800dpi; 4 buttons

Bluetooth headset; QuickPair; Multi-point for connecting to 2 phones simultaneously; 30 feet

TEST CENTRE RATINGS (All Scores out of 10)

Features 6.5
Performance 7.0
Build Quality 6.5
Value for money 5.5

Features 6.0
Performance 5.0
Build Quality 5.0
Value for money 5.0

Features 7.0
Performance 8.0
Build Quality 7.5
Value for money 8.0

Features 7.0
Performance 8.0
Build Quality 7.5
Value for money 6.5

WE SAY

This is a monochrome laser printer. It gave out speedy prints taking mere 11 secs for a quality text document and 12.5 secs for a mixed document. Copying took around 13.5 secs. Quality of the prints was quite good. Pricing is on the higher side. Would recommend it around ₹8,500.

6.0

Go for them if you like bass, don't care too much about detail, and different looks. Priced at ₹680 we'd say they're still not value for money and only a small step up from picking up unbranded headphones off the street. A price of ₹500 might be more justified.

5.0

For a price of ₹949, the Amkette Air wireless mouse makes for a good deal. It isn't very expensive, is solidly built, comfortable to use and looks good- it seems as if this mouse has everything going for it. Check it out, if you need a wireless mouse for your PC or laptop.

7.5

Most Bluetooth headsets suffer from the lack of call clarity, or they are plainly uncomfortable. Plantronics M100 does offer a huge improvement on both fronts. The call clarity on offer is extremely good, comfortable for prolonged use. The price of ₹4,199 is a bit steep though.

7.0

CELL PHONE



Nokia X3-02
Price: ₹8,839



Lava B8
Price: ₹5,299



Micromax M2
Price: ₹4,500



Apacer AC230
Price: ₹5,899

SPECIFICATIONS

5MP camera without flash; 3.5mm headphone jack; 2.4-inch touch screen; 256k colours resolution

SIM (GSM+GSM); Display: 2.3-inch LCD, Resolution: 320 x 240, Maximum screen colours: 262K

SIM (GSM+GSM); Display: 2-inches, Screen resolution: 240 x 320

Form Factor: 2.5-inch SATA; Capacity: 500 GB; Interface: USB 3; Rotational Speed: 5400 RPM

TEST CENTRE RATINGS (All Scores out of 10)

Features 7.5
Performance 7
Build Quality 7.5
Value for money 7

Features 7.0
Performance 6.0
Build Quality 6.5
Value for money 7.0

Features 6.0
Performance 5.5
Build Quality 6.0
Value for money 6.5

Features 6.0
Performance 6.5
Build Quality 5.5
Value for money 5.0

WE SAY

The Nokia X3-02 offers something rare in this price bracket - touchscreen and a physical keypad. It's a smartphone but the Symbian S40 attempts to give a more "matter to fact" look. For detailed review go to: <http://bit.ly/f4EhNv>

7.0

LAVA B8 is a dual SIM, QWERTY phone with interesting feature sets like pedometer, G-sensor and webcam. However, the B8's main USP - QWERTY keypad and the camera - is its own undoing. For detailed review go to: <http://bit.ly/hGEj86>

6.5

M2 does not justify its music tag. It has a limited 2 GB internal memory with no support for expansion. The playlist interface is not user-friendly. At a price tag of ₹4,500 it's not a recommended buy. For more detailed review go to: <http://bit.ly/fq2Yo0>

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Transfer speeds were: Sequential Read / Write: 76 / 73 MB/s and Assorted Read / Write: 58 / 33 MB/s. These speeds were faster than Toshiba Canvio 500GB but slower than Iomega eGo portable 1 TB USB 3.0 drive. At ₹5,899 it's a tad bit expensive considering its 500GB.

6.0

Install Android on Iphone

Six easy steps to install Android on the iPhone
<http://lifehack.kr/eMNjrC>

Latest Wikileaks release

Nearly 800 secret documents from the Guantanamo
 Prison in Cuba have been released by Wikileaks

Sony Ericsson Xperia Arc

Redefining sleekness but what else?

To call the Xperia Arc sleek and slim would be an understatement. One look and exclamations burst forth - its classic profile, impossibly slim tapering waistline and the winning combination of curves and angles that make devices like the HTC Desire HD and the original Xperia X10i look like fossils. But it is the front that captivates - a wonderful blend of large glass expanse that includes the display and bezel, and three distinct chromed buttons sitting beneath it, on the cusp of a downward slope. Kudos to Sony Ericsson for producing what has to be one of the sexiest looking phones ever, and the Arc looks better in silver than in black, the battery cover that we find shockingly cheap in contrast to the superlative design.

Specifications

Display: 4.2-inches, 480 x 854 pixels; OS: Android 2.3; SoC: Qualcomm MSM 8255; RAM: 512 MB; memory expansion: microSD; battery: 1500 mAh; Weight: 116 grams

Contact

Sony Ericsson India

Phone: 1800-111-800

Web site: www.sonyericsson.com

Price: ₹32,000 (MRP)

Light she is, at 116 grams, but an airhead she is not, for the Arc houses a Qualcomm MSM 8255 with 512 MB of RAM, enough to keep Gingerbread running smoothly, with the odd recalcitrant hiccup. And no, unlike the Galaxy S, the rear doesn't get warm after prolonged use. The three designer buttons we spoke of are soft, and exude good feedback, it would be nice to have the functions of these keys backlit though. The power button located on the top is delineated and easy to use, as is (surprisingly) the small but intuitive volume rocker. The 3.5mm jack is located to the left side, while the charging port is located on the right, with a useful LED indicator. The camera button works quite well, with an intuitive half click autofocus. There is a micro HDMI port housed beneath a flap - useful for streaming content to your HDTV, although the Arc lacks the necessary connector.

The 4.2-inch display offers good colour and contrast, with the Bravia Engine making a difference, although what's with missing out on DivX/Xvid playback? Text is super sharp - tiny font sizes are also very readable. The capacitive touch is sensitive, the onscreen keypad on the Arc works well and is quite intuitive.

There are five home screens and a bar that can contain up to four shortcuts, although removing a shortcut like the media folder from this bar prompts for a delete of all stored media, while others like Messaging can be removed,

and replaced from the main menu - strange.

While browsing using EDGE we had a couple of hiccups when our server connection was inexplicably lost, while two other phones had no problems on the same network. The Arc came with no Office suite installed and the interface lags, even when scrolling through locally stored SMS'.

Signal quality is good, although call clarity isn't as good, the earpiece volume nosedives 50 per cent of what it is on other calls. Additionally, cutting a call doesn't work immediately and one has to touch the control again, after a second - annoying. The hands-free is pretty good. The

loudspeaker isn't loud in addition to being directional and tinny, and distorts at maximum volume, though not at 2 rungs lower. The hands-free offers good music quality with decent bass and an enjoyable mid-range. Panning and zooming while browsing could be a

bit faster. In general, the Arc isn't as speedy through its menus as the HTC Desire HD, that runs the same SoC.

The camera offers good crispness and colour outdoors - very acceptable for a cell-phone camera. Indoor photo quality takes a beating and the flash isn't as powerful as the unit on the Desire HD. Battery life is decent for a touch-screen phone, though certainly not spectacular - the Arc will see through a moderate day of mailing and surfing on a single charge with an hour of music.

At an MRP of ₹32,000, the Arc sure has flagship pricing, and is expensive given the competition is priced lower. Also, unlike the Desire HD, who's interface and applications ran perfectly, the Arc comes across as having been rushed to a release date to control the competition, and

Sony Ericsson should have ironed out the little niggles we faced. Additionally with the competition announcing dual-core phones and given Sony Ericssons slowness to market of Android phones, we're wondering if the Arc is 6 months late. The Arc is gorgeous in the flesh, but beneath it lie imperfections that make us hesitate.

Michael Browne



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10

Features.....7.5
 Performance.....6.5
 Build.....7.0
 Value for money.....6.0

Google Chrome

Although the browser is mostly open source, it includes some closed components in the version that you can download from Google. For those looking for a fully open source version, there is Chromium, which is a build made from only the open source bits of Google Chrome.

Due the extensively shared source code between Google Chrome and Chromium, these Tips and Tricks should be applicable to both. Some might even work with other Chromium-based browsers.

about:flags

While not as extensive (or true), `about:flags` can be considered the nearest equivalent of `about:config` in Firefox. Simply type `about:flags` as the URL in a new tab, and you will be greeted with a list of flags that can be toggled to enable hidden features in Google Chrome.

Some of the Tips we will use will require setting flags here. After doing so, all you need to do is restart the browser, and the new setting will come in effect. In many cases this will not be enough to activate a feature.

Tabs on the side

If you have a large monitor, you might want to switch displaying tabs on the side, in order to gain more space



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for displaying tabs. Unlike with Firefox, you do not need to install an extension to get tabs on the side, as this merely requires you to toggle a flag in `about:flags`.

After you have enabled the “Side Tabs” experiment in `about:flags` simply right-click on a tab and click “Use side tabs” to switch between tabs-on-top and tabs-on-the-side.

Some of the limitations with Google’s side tabs are:

- If you open too many tabs, and the number of tabs is more than what can be displayed in the vertical space available, the list of tabs will

not scroll, and some tabs will be inaccessible.

- You cannot resize the horizontal space available for tabs.



Initial settings

- The right-click menu while working with side-tabs is not very clear, it still contains “Close tabs to the Right” which no longer makes sense.

Use multiple Profiles

This is quite simple with Firefox since it has a profile manager. However, it is not too complicated for Google Chrome either. Soon it might get even simpler as Google Chrome gets its own profile manager, which promises to make it more pow-

erful than the one with Firefox.

Google Chrome has a command-line parameter `--user-data-dir` that can be used for this purpose.

To create a new profile with Google Chrome, first of all, create a new directory to hold this profile data. Let us assume you wish to store the data for your new profile in `D:\Chrome`. In this case create a shortcut to Google Chrome—you could copy your existing desktop shortcut and edit it—and add the following parameter:

```
--user-data-dir=D:\Chrome
```

Your full path should look something like:

```
"C:\Documents and Settings\username\Local Settings\Application Data\Google\Chrome\Application\chrome.exe" --user-data-dir=D:\Chrome
```

Whenever you want to

launch Google Chrome with this profile, simply use this shortcut. You can create multiple folders and multiple shortcuts for each profile.

If you’d prefer to use a ready-made tool for this job instead of mucking about with command-line parameters and shortcuts, you can take a look at ChromeDeck, which is an open source project for managing Google Chrome profiles.

Enable Sync

Chances are you use multiple



You are warned before proceeding

computers, and if you do you will probably use the same browser on all of them. If that browser happens to be Google Chrome, then you will be pleased to know that it has a Synchronization feature built in. You can keep your browser customisations synchronised among multiple computers using Google Chrome Sync.

Over the past few versions of Google Chrome, the browser has gained support for syncing an increasing amount of data. It started from simply synchronizing bookmarks in Google Chrome 4, and today, in the latest Google Chrome 8 it supports synchronising preferences, Autofill data, Themes, extensions, and apps in addition to bookmarks.

Google Chrome Sync requires a Google Account, and stores your data in your Google Docs account. It is easy to enable, as an option is available for it under the “Personal Stuff” tab of your Preferences page. There you can enable or disable sync and choose what all you’d like to keep synced.

In Chrome 9 (currently in the dev channel) it is possible to synchronise passwords as well, and adding and additional sync key for encrypting your data.

Run Greasemonkey scripts

Greasemonkey is like an add-on that makes your browser extensible in yet another way.

These scripts run on web pages and can often add features that are not available by default. For example, you will find Greasemonkey scripts that add a download button to YouTube, preview audio files stored in Google Docs, or show prices in your local currency on Amazon. Since these scripts run in the context of the web site itself, many of these can be run on any browser, and there have always been ways

of doing so. The great thing is that Greasemonkey scripts are natively supported on Google Chrome, without installing any add-on.

To install Greasemonkey scripts, visit <http://userscripts.org> and search away for the scripts you want. Once you find a script, just click the Install button, and Google Chrome will show the usual Google Chrome extension installation dialog. You will be able to manage your installed Greasemonkey scripts along with the rest of your extensions.

Private browsing

Often times we need to perform activities on our browser that we’d rather keep private. For this purpose many browser include a mode of browsing in which no records are kept of a user’s activities.

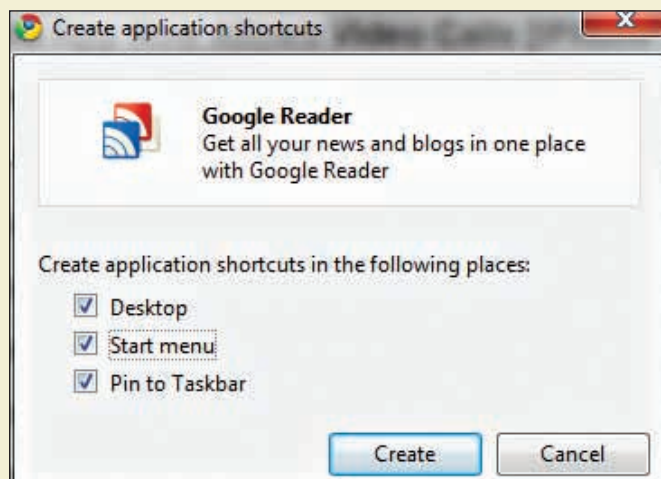
If you want, you can simply create a new profile for this purpose, however a simpler way is



For enhanced privacy, go incognito

to use the “Incognito” feature in Google Chrome. Unlike in Firefox, Google Chrome can open a new “Incognito window” along with your usual browsing session, whereas in Firefox, your normal browsing session would be suspended.

Whatever you do in tabs opened in this incognito window is not recorded, it is as if you are working on



Create shortcuts for your applications

a read-only copy of your browser. Read-only means that your browsing history and bookmarks are still available (unlike with the separate profile approach), however they are not affected by your activities while private browsing is engaged.

Google Chrome disables extensions in Incognito mode since they might inadvert-

You can also use the shortcut [Ctrl]+[Shift]+[N].

Create single-site browsers

Google Chrome has inbuilt support for creating single-site browsers. What this means is, you can create a direct shortcut to a web site you like on your desktop, start menu, or pinned to your taskbar, clicking on which will open the web site in its own window, as if it were a normal desktop application. Such windows will not even have the minimal UI that Google Chrome has. They are simple windows with a title bar and the content of the web page.

This can be incredibly useful for web applications such as Gmail, or Aviary. If one application crashes, it will not bring down the other applications or the tabs opened in Google Chrome. Additionally, each such application will appear as a separate icon in the task bar instead of grouping with your other Google Chrome Windows.

Creating such a web application shortcut is simple, click on the wrench-menu, and under the “Tools” submenu, you will find “Create application shortcuts...”. Clicking on this will pop up a dialog that will give you the option to create short-



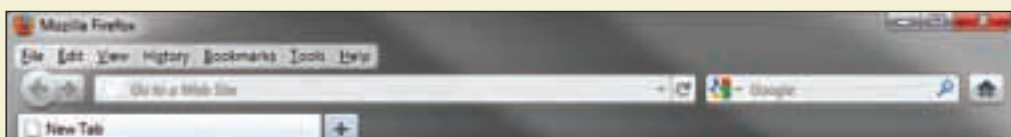
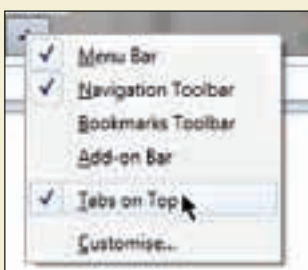
Get additional functions with plug-ins

cuts on your desktop, start menu, and the task bar.

Manage installed plug-ins

Browser plug-ins can enhance your browsing experience. However, they can also be a source of bugs and instability if you do not keep them updated. Often applications you install will add browser plug-ins to tap into your web experience. Unless you are using the functionality provided by the application it might be wise to disable the plug-ins they install.

To see a list of your installed plug-ins, you only need to enter about:plugins in the browser address bar. You will be taken to a page with a list of plug-ins installed for your browser.



Switching from tabs on top to tabs below

Each plug-in will have a link below it that will let you disable the plug-in.

To make it easier to ensure that you have the latest version of your browser plug-ins installed, you can make use of the Secbrowsing > plugin version checker extension for Google Chrome. This handy extension will check if you are running the latest version of the plug-ins you have installed and notify you if that is not the case.

Add RSS support

Quite unfortunately, Google Chrome by default does not support even detecting RSS feeds. If you have a use a web site's feed while using Google Chrome, you have to copy the URL for your RSS feed or web site, and paste it in the RSS feed reader of your choice.

This isn't intuitive at all, and can be rather annoying as you can imagine. You may come across web sites that don't even offer a direct URL for their feeds, and instead choose to have them embedded in the

page's code, making detecting feeds even harder.

The good news is that this can be easily remedied using an extension by Google. The RSS Subscription Extension by Google shows a small indicator in the address bar when the current page has an associated RSS feed. Click on this icon for a preview of the feed and allows you to easily subscribe to it. It includes a few subscription services by default, however you can configure your own.

Firefox 4 Mimic Firefox 3

Firefox introduces a new UI that reduces the side of the UI, putting tabs on top and removing the menu. This might not sit well everyone though, so Firefox still

clicking on "Menu bar" in the same menu.

Now you have a Firefox 3-like UI, except that there is no status bar. If you just need the status bar of add-on icons, then there is a simple way to toggle between displaying and hiding the add-on bar using the shortcut [Ctrl]+/

Get back the old Status bar

Firefox 4 removes the status bar from the interface in order to save even more space in the UI. Instead of the status bar, Firefox displays the connection status hovering over your content, placed at the bottom-left or bottom-right corner of the page depending on where you mouse is located. To host add-on icons, Firefox has a completely new

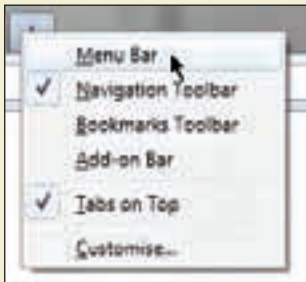


A more Firefox 3ish look

offers an option to get back the old UI, or somewhere between the new and old UI. You can toggle between tabs-on-top and tabs-on-bottom by right-clicking in an empty space in the tab-bar (or going to the options sub-menu of the Firefox button menu), and deselecting "Tabs on top" by clicking on it.

Similarly, you can get back the old Firefox menu by

add-on bar that appears in the same place, and can be quickly toggled with [Ctrl] + /. If you want to get back the old status bar that displayed connection status and other such information, you can do so by installing the Status-4-Evar add-on. Not only does this add-on bring back the old status bar, it adds a number of nice features that were removed / written for Firefox, but never made it in. For example, you can display the loading progress as a line under, over, or inside the address bar.



You can bring back the good old Firefox menu easily

Get the latest features

Firefox now offers four channels of updates:

Nightly

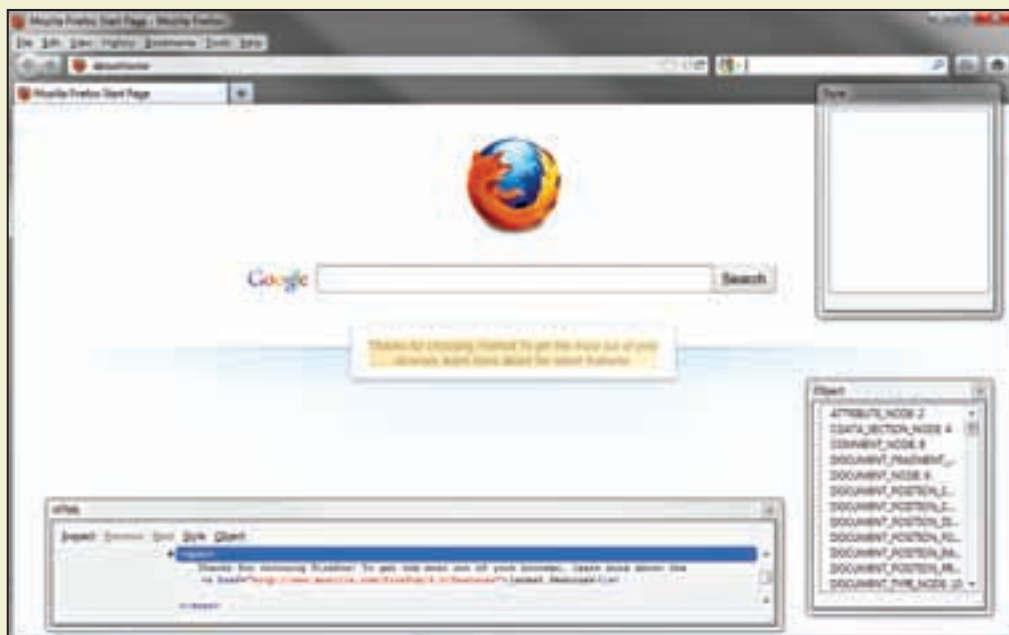
The nightly update channel is updated every day, and the browser can go from being completely solid one day to crashing on startup on another. This channel also brings the latest changes

Aurora

This is a completely new channel of updates for Firefox. It receives minimal testing and will generally offer the latest relatively stable Firefox experience in the latest version.



Status-4-Evar at work bringing back the old status bar



Pretty functional if not pretty

every day. The releases are not tested and can damage your profile.

Beta

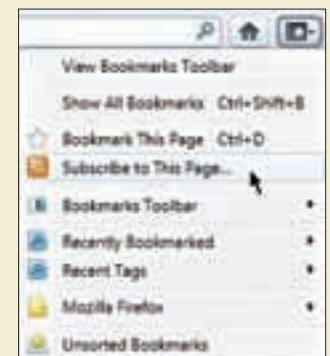
Beta versions of Firefox will be released from time to time in order to let a wide number of users test functionality that is coming in future versions of Firefox. Firefox betas are tested, but might have bugs that won't be there in the release version of the browser.

Release

This is the good old channel in which new stable releases such as Firefox 5, 6, 7 and beyond will occur. You will get an update only if it fixes an existing security or performance bug.

You can visit the following URL to download a version of Firefox from the channel you prefer: <http://www.mozilla.com/firefox/channel/>.

The nightly channel isn't listed here, because it is only useful for a minority of users who are developing Firefox, or add-ons for it, and it is likely they already know where it is. If you're still curious, go to <http://nightly.mozilla.org/>.



Current mechanism for subscribing to feeds

Enable inspector

For Firefox 4, Mozilla worked on an inbuilt inspect feature quite similar to the one found in Chrome, and Opera, and available for Firefox with FireBug. The UI for this feature is not very polished, but it does the job well enough. If all you need to do is inspect the source code and CSS styling information for elements on the page, without changing anything, this might be adequate. To enable this feature:

- Go to the `about:config` page by entering it in your location bar and agreeing with the warning.
- Enter `inspector` in the filter area.
- Now double-click on the `devtools.inspector.enabled` entry.
- Restart Firefox.

Now you will find a new entry "Inspect" under the "Web Developer" sub-menu in the Firefox button. You can

also find it in the tools menu if you have the menu enabled, or you can toggle it with [Ctrl]+[Shift]+[I].

The feature wasn't completed and is not enabled by default. It works well enough but can be quite buggy, so beware before enabling it.

Get back the RSS subscription button

If you are a heavy RSS / Atom feeds user you might have been disappointed by Mozilla's decision to remove the RSS button from the address bar. The good news is that the functionality is still there, albeit further away under the bookmark menu.

A better option is to add back the RSS button to the navigation bar. To do so, right click on the Firefox button, and under Options click on "Toolbar Layout...". This will open a dialog that has a number of widgets that can be added to the add-on bar or the navigation bar. There will be a button labelled "Subscribe". Drag this to the add-on bar, navigation bar or even the tab bar and menu bar!

You can now click on this button to get the same functionality as the RSS button in the Firefox 3 address bar offered.

NTFS Save disk space

No matter how much space is available on the computer, one would not wanton space on the disks ever, dawn or dusk. So here is a nifty little trick if you haven't dug it out yet. Right-click a folder (or a file or drive) in which you want to have



Compressed folder is named in blue

some empty racks, and open its properties. On the General tab, click the Advanced button and enable the option 'Compress contents to save disk

space' on the new window that pops up. Apply the changes and eventually (depending on the volume of data to compress), you will notice that you have saved some space and the folder name now turns blue in Windows explorer. Alert! Don't compress the C: drive. Compression and decompression takes time. Compressing system or program files will also hit performance.

Secure your content

Encryption for some might be a symbol of opulence but for those working under tight conditions, with sensitive data under the hood, it's a necessity. Nonetheless, it is always useful in concealing something which you want let not others know. NTFS provides a natty encryption feature for Professional, Enterprise and Ultimate editions of Windows 7. Sometimes the encryption feature built into NTFS is also referred as EFS which is an acronym for Encrypting File System. To encrypt a folder, just open its properties and click the 'Advanced' button on the general tab. On the advanced attributes window, enable the "Encrypt contents to secure data" option and apply. Accomplished, the folder name glows green in Windows explorer.



Encrypted folder appears in green

Now double click the folder and try and open a file which you saved there. Before you wonder why Windows does not interrogate any password but lets you in and reveals the contents without barring you from them, let us tell you something breathtaking about the NTFS encryption feature, a little gamy though: it's transparent to the user who encrypted the content. NTFS files encrypted by you will behave just like any

other normal file on the disk. However, when someone tries to unseal the same content using another account, NTFS would not allow them to read the data! No admission to foreign agents! Isn't that easier than you thought?

Automatic compression and encryption

The best thing about applying these attributes to folders is the automated behaviour of NTFS which it shows towards the content which is inside them. Unless you selected the "Apply changes to this folder only" option when applying the attribute, NTFS would automatically compress any

is done automatically but the vice versa is not doable.

Notably, encryption is disabled when you copy an encrypted file from NTFS drives to FAT32 drives. Windows will automatically decrypt an encrypted file / folder when you copy or move it to a FAT32 drive (such as a USB drive).

Backup your recovery key

Once you have encrypted your first file or folder, Windows will prompt you to back up your recovery key with a balloon on the bottom of the screen. Click on the balloon to export the encryption keys.

Doing so makes sure that the day your computer decides



Click the balloon to back up your EFS keys

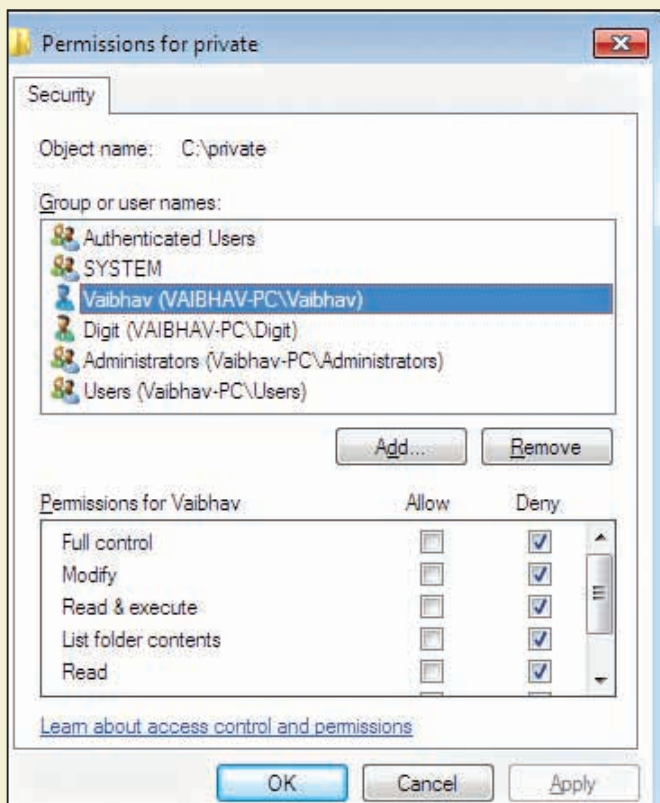
content you copy to the folder. Remember that both encryption and compression cannot go hand in hand with NTFS. This is majorly due to the way NTFS encrypts contents.

Let us assume that you have two folders with the names "Normal" and "Compressed" with compression enabled on the 'Compressed' folder and neither encryption nor compression enabled on 'Normal'. When you move (or copy) a file from 'Normal' to the 'Compressed' folder, NTFS would automatically compress the contents for you. Similarly when you move a file from 'Compressed' to 'Normal', decompression would automatically be done. Saved you from the sweat, eh?

Encryption works in a similar fashion. When you move any non-encrypted content to an encrypted folder, encryption

to go kaput and denies booting with a not-so-humble error message, you will have the keys by virtue of which you can take the hard disk out, attach it to another computer and retrieve the data. If you do not backup your keys to a safe external location, your data will be locked in limbo. You cannot retrieve the data on other computer with the other computer's certificates, even if you have the same user name and passwords on both.

We know how frustrating it can be to skip backing up the keys just when the balloon appears on the screen. Once you miss it and then you would have to stress out all the energy of your brain, just to find out where Windows has kept the keys. To ease you up, we have done the toiling part and here is how you export the keys even if you slipped off the first chance:



Changing security settings of an NTFS folder

On the start menu search box, type "certmgr.msc" and hit enter. On the new certificate manager window that opens up, expand the 'personal' folder on the left pane and then open the 'certificates' folder. You will find your certificate resting there. Double click it to open the certificate properties. On the 'details' tab, click the 'copy to file' button and you are ready to export your keys.

In fact, this method would also save you when you have just accidentally deleted the only copy of the file which had the keys in it. If you are wondering on how to import the keys from the exported PFX file, here is the majestic *modus operandi*: double click the file!

Using permissions to prevent unwanted eyes

If you have ever cared to trouble the Google servers hunting for a freeware which you suppose would help you defend your

folders and would have found everything from spywares and Trojans to sharewares and expensive but difficult to use programs, you will love the way NTFS does it for free. To protect a folder, right click and open the folder properties. Go to security tab and click on the 'edit' button. Now you can decide on which permissions you want for which user. You can opt for different permissions for different users.

If a user is not listed currently, you can add him in the list by using the 'Add' button. Bear in mind, gentlemen, that if you are a user with a limited account, or there is another administrator on the system, he will be able to edit the permissions according to his fancies.

Preventing other users from launching a program

Protecting a folder sometimes is not as essential as preventing other users from running a

program. This might be the case when the program you use is sensitive to be opened such an enterprise class program which is also installed on your laptop for your ease. Parental controls too can be enforced using this deception.

All you need to do is to open the security properties of an executable file and 'deny' the 'Read & Execute' permissions on that file for the users whom you do not want to run the program. Normal users cannot change the permissions unless they are exclusively allowed for it but again, another administrator will be able to revert back the settings if he wishes to.

Registry Registry too has permissions

As strange as it might sound, Registry too has permissions. You can create a new key and more keys and name-value pairs in the registry to your benefit. Although it is not the best place to hide secrets, there are no limits to innovations! Remember though that you should not use this feature to

Disable Compression on your system

Although NTFS serves with two great and useful features of Encryption and Compression on your system, they have their own hitches. Compression needs time. Whenever you open a compressed file, decompression has to be done. When you make changes to such a file, the contents or the changes are to be compressed again. In some situations (such as a video editing environment), this has to be avoided at all costs.

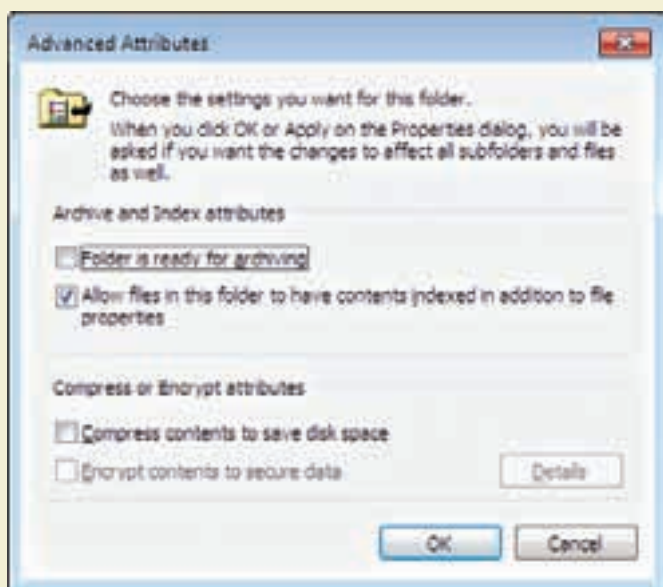
You can ask Windows to disable NTFS compression feature. For this, you need to open the registry editor (type `regedit` on the start search, hit Enter and say 'yes' to UAC prompt) and navigate to the following location on the left pane: `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\FileSystem`. On the right pane find the key named 'NtfsDisableCompression'. Now, double click it to edit the value and enter '1' (without quotes) in the value data field.



Compression disabled via Registry

alter permissions on any key you like. It may cost you a complete system reinstall! But you can surely keep treasured some of your little nifty secrets somewhere deep down the registry and lock it so that others do not discover it. To use this feature, simply right click a key and select 'permissions...'

Upon restart, your machine will no more have the forte to compress files. Not to worry though. The files which are already compressed will continue to behave normal but no new files will be fortunate enough to be compressed anymore. Even those which were compressed before cannot be



A registry hack can disable encryption!

decompressed and compressed back again. If you try, you get an error message.

Hey you! No secrets on my machine

Ok, we know you are the administrator. You can have everything under your jurisdiction but one thing might flabbergast you: once a user has encrypted something, you cannot see it unless you know his password. "What? Don't fool me. I still can change his password." If that is what your brain says, you are mistaken. You may be the tsar of your system but when it comes to encrypted content, NTFS does not allow you to simply change anyone's password and enjoy a sneak peek at what was intended to be kept segregated from the cruel world. As and when the password of a user is altered, the NTFS encryp-

tion keys get changed and all the content encrypted becomes inaccessible. Some imperators do not like someone else secreting secrets in their colonies. They simply like to rule. Although there are more complicated ways to stop users from denying access to their content by encrypting it, we suggest you use a simpler method: a registry hack to disable encryption on the system!

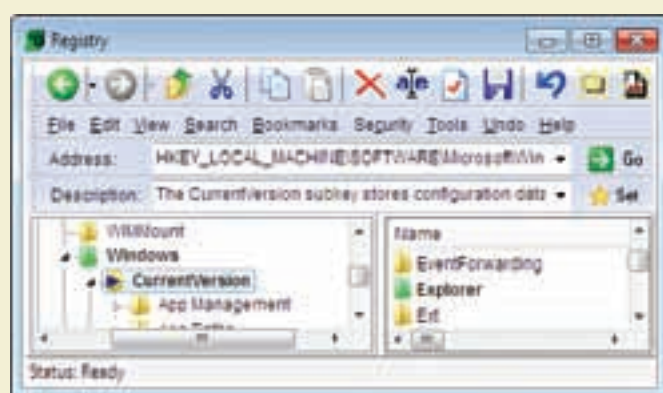
Simply open the registry editor and navigate to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\FileSystem and on the right side, change the value of the key 'NtfsDisableEncryption' to '1' (once again, without quotes). Reboot and there you have encryption disabled.

But before you really do that, be advised: if you have any encrypted file(s) on the system, they become inac-

cessible after you have casted the feature away. Although this can prove to be a troublemaker, it is a good way to fool someone that the file has been corrupted. Encrypted files behave as if the access has been denied to them! Different programs will show different error messages. Some might say that the file is corrupted (such as MS Excel); some may blame you for access denial (Notepad) and some might even say that the file does not exist (now that's comical)!

Oh, and in case you want to use the files again, just repeat the trick, this time setting the

description of the important keys in the registry? Well, you have something called "Registrar Lite" which does exactly what we told you. It's a registry editor and would happily show you the description of keys as you walk through. Interested already? Just ask your browser to get you to <http://www.resplendence.com/download/RegistrarLite.exe> and you have the setup file! You know the next step already. Once installed, launch the program from start menu and you have a sweet friend guiding you through the ever so complicated registry. It's



Registrar Lite helps you understand registry better

value to '0' and rebooting the system. The files are once again at your hands.

It looks important; but is it?

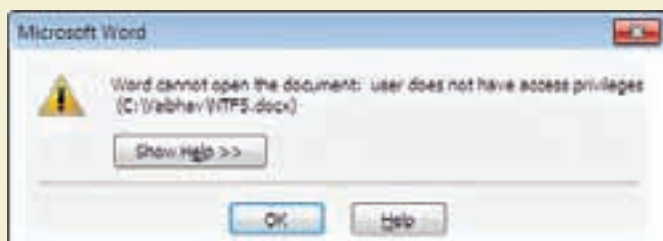
Registry is massive in size. There are a lot of keys and values that hold information which you, as a registry hacker would like to tweak around with. But how would you know the most important ones or in other words, how would you know which keys store what information? Going through the whole of it trying to change every value in the registry and then look for the effect after a restart isn't the best way to use your time tweaking the registry!

How about having the registry editor show you a short

also useful in case some virus or spyware locks down the registry editor which ships with Windows. Remember though, you actually don't have a reason to change what you really do not understand. No matter what tool you bring into play, a small slipup is enough to put you out of the game!

Useful Tools for Twitter

The micro blogging site Twitter is not new to anyone, but there is an array of tools and clients out there for even the most experienced users to try and explore. Here we recommend a few apps that the most addicted amongst you will love and enjoy. Tweeting was never easier or more fun.



Word complains about access privileges on an encrypted file after disabling encryption

Track your Followers

Initially you may have started following people right away so as to get a feel of Twitter, since the only way to join a conversation was to follow one first. But slowly if you see a need to streamline the list of people you follow, tools like Twitter Grader and Tweetcloud are at your service. Twitter Grader gives a grade from 1 to 100 to every user you run through its system, thus allowing you to investigate how engaged the people you follow are. Twinfluence is another useful tool with a more scientific approach to help you figure out who you wish to follow. Tweetcloud actually creates a tag cloud of a person's tweets to give a bird's eye view of the type of things they tweet about helping you see the content at a glance and decide better.

Figure out your Friends

Unlike other social networking sites Twitter allows you to follow most people without their permission and at times it helps to know which of the numerous names you follow actually follow you back and are more like friends rather than followers. Try Twitter Karma, a great app that lets you sort through all those you follow and see who are the ones you have a mutual follow/follow-back relationship with. Slightly easier in presentation for sorting through larger number of people is Friend or Follow. For those of you with relatively evolved Twitter presence, it might even be a good idea to sign up for an alternative service like Twitterless that also notifies you when you lose a follower. With almost 80% of Twitter users having less than 10 total tweets, it might be required to weed out the inactive ones regularly. For this you can use

Nest.Unclutterer or Twitoria, which block users who are following more than a certain number of people or who have been inactive for a certain number of days.

Using URL Shortners

With that 140 character limit, a handy URL shortner will prove to be one of your most needed services in Twitter world. Initially Twitter was built-in with TinyURL, later replaced by bit.ly. If you use a dedicated Twitter client this job will be taken care of more easily. Like on TweetDeck, enable "Autoshorten URLs" in the update window and TweetDeck will automatically shorten any URLs that you type or paste into the update box. To make the shortened versions more recognizable, like TweetDeck, you too can use the youtube.be shortner for Youtube videos and flic.kr for Flickr links. Bit.ly does a fine job keeping track of clicks, however platforms like su.pr (stumble upon) will also keep other helpful data, like best time of day to send out links.

Between your Blog and Twitter

For the crowds more active in cyber space, linking your


Try Twitterfeed to feed your blog into Twitter, provide the URL of a blog's RSS feed and how often you want posts to Twitter, and Twitterfeed takes care of the rest. Also, next time instead of having to manually update your Facebook with your blog posts, you can let Twitterfeed handle it (without even using a Twitter account). If you are a Feedburner user, go to the Publicize tab in your account, then go to Socialize>Add Twitter Account, and now you are ready to post content on your Twitter account with the blog post's title and link. You can try things the other way round too, use Twitter Badges to post your Twitter updates on your blog. Just log into Twitter via the Twitter Badges webpage and pick the type of blog you use and follow simple instructions to finish the Twitter blog widget. Word of caution, remember to take a backup of all your content before you modify your blog's theme or layout or add another widget, as there may

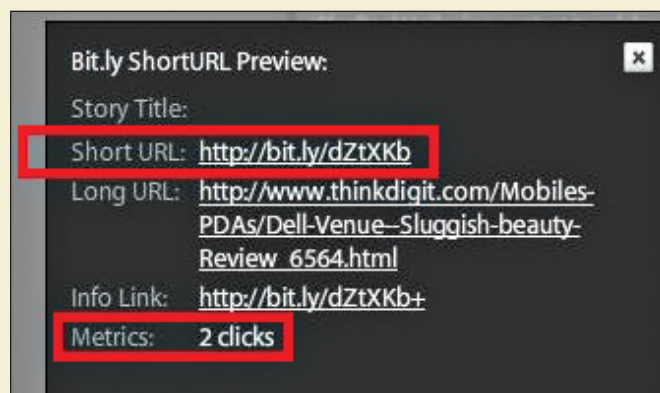


Adding a few plug-ins would transform your Twitter experience

provides two-way communication between your Twitter account and blog. To further simplify matters, try using a tool like dlvr.it, which automatically feeds your blog to Twitter, Facebook, Google Buzz and others, whole providing your with real time stats on your links, followers, friends and re-tweets.

Managing Multiple Accounts

With more and more people using Twitter for personal and professional reasons, the demand for a Twitter client to match these multifaceted needs is on the rise. Popular choices include TweetDeck, Seesmic(with no limits on the number of accounts you want to add), DestroyTwitter etc which are free and can be used from your desktop, phone, or on the web. As browser addons, try Echofon (formerly Twitterfox), a Firefox extension where you can toggle through multiple accounts in column view, ChromeBird, for Google Chrome, or Adjix2Twitter-Link, a bookmarklet by adjix that simply allows you to tweet links while browsing the web, but since you can specify which account to tweet from each time, this can be extremely handy at times. 



Use URL shorteners to save on characters

blog with your twitter account can help promote your blog as well as be a huge help in saving time and hassle.

be a few problems in store. If your blog is on Word Press, use Twitter Tools, a plug in for Word Press blogs that

THE NO.1 SPORTS MAGAZINE GOES ONLINE

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Log on and get transported to the world of cricket.

We know you can never have enough of cricket. So Cricket Today has gone online. Simply log on and get live ball-by-ball coverage of all international matches, exciting write-ups by some of the best-known cricketers and critics, exclusive picture & video gallery. The site also includes in-depth statistics of international and first-class cricketers and all the action that happens on the field.

Cricket
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QUICK SCORE UPDATES | DESKTOP SCORECARD | EXCITING ONLINE GAMES | BLOGS & INTERVIEWS
LATEST NEWS & COVERAGE | COMPLETE SERIES SCHEDULE | PICTURE & VIDEO GALLERY | DOWNLOAD ZONE



That Can Be My Next Tweet!

Try this quirky online service that mixes up words and phrases from your past tweets to give you totally random surreal sounding tweets. Go to: <http://yes.thatcan.be/my/next/tweet/>

Twitter competition?

UberMedia an application make that uses the twitter API, is said to be planning a social network of its own to rival the microblogging biggie

Heating issues, IP conflicts, dual boots, and lost operating systems

We solve them all...

Administrator woes

While I'm logged in as an Administrator and click on User Accounts in the Control Panel, it appears blank. What do I do? I can't change the password either. I use Windows XP Professional (32 bit). I'm certain my computer is virus free. I use Avast and more importantly, my PC is not connected to the internet. Also the Help and Support icon in the start menu appears blank too. Please help.

Abhishek Kalia

Hi Abhishek,

You say you are the Administrator and still cannot find the Administrator account in User Accounts. This may be because the Administrator account logon option is visible only in the Safe mode if more than one account is created on the system. Admin account is available in the normal mode if there are no other accounts on the system.

Follow these steps:

Go to Start > Run

Type mmc in the box and click OK to start MMC ie. Microsoft Management Console. Start the Local Users and Groups snap-in. Under Console Root, expand Local Users and Groups, and then click Users.

In the right pane, right-click Administrator, and then click Set Password.

Click Proceed in the message box that appears.

Type and confirm the new password in the appropriate boxes, and then click OK.

DVD Copy protection

I want to protect my CD/DVD from being copied. To elaborate further, this is what I want: When someone inserts my CD/DVD in their PC it should run but not be copied.

Dilip Soni

Honestly, if you burn data on a DVD, it can be copied. There are lots of software that will allow you to protect

data from being copied like CD Shield, CrypKey, PTPProtect or WTM Copy Protection among others. But these are paid software. Having said that, there are lots of other tools which will allow you to still copy DVDs. Case in point is the rampant copying of Hollywood DVDs, which come pre loaded with content scrambling system (CSS) - a copy-protection technology designed to prevent DVD movies from being copied. So yeah, you will get a basic level of copy protection from the software suggested, but if the DVD is being handled by a smart person, he or she will find the tools to copy the DVD - the most easy one we can recall is CloneDVD.

Bottomline: DVD copy protection is not fool-proof.

Samsung Wave 525 issues

I want to know if Samsung wave 525(GT-S5253) is 3G ready? Also please suggest how I can change the boring menu background colour (white) in my Samsung Wave 525? And from which web site I can get the latest 3D games for my Wave 525?

Apratim Dutta

Wave 525 is not 3G ready.

You can change the menu background using themes.

We have also heard that the new version of bada OS ie. bada 2.0 will offer more options in terms of look and feel. If 525 supports the new version of bada then you can avail the options provided. As for 3D games you could try the official source - <http://www.samsungapps.com/>.

We had reviewed the phone sometime back, so you can always refer to it on <http://bit.ly/FFGQPN>

IP Address Conflict

I use BSNL broadband, and these days it is having some sort of connectivity issues. Earlier I had XP installed on my PC, and it displayed the message: "IP ADDRESS CONFLICT". Now I have Windows 7, but the same problem persists. Now it shows a small yellow sign on the connection.

Rajat Arora

IP Address Conflict occurs when two computers on the network have the same IP address. This can happen if the ISP assigns the same static IP to two computers on a network or a malfunction in the network's DHCP server allows the same dynamic address to automatically be assigned to multiple computers. You need to tell your service provider to assign you a different IP address. Other way is to select the 'Obtain an IP address

automatically' and 'Obtain DNS Server address automatically' radio buttons under TCP/IP Properties.

OS Mayhem

I had a Windows 7 Ultimate 32 bit installed in my PC, but GTA 4 wasn't working in it. So I decided to install a Windows XP SP3 without removing Windows 7, thinking two OSes can work alongside. XP did get installed, but then I couldn't run Windows 7 on my PC. I ran

Windows 7 startup repair,

but it was of no use. Then I formatted the drive in which XP was installed, then also Windows 7 didn't run! Now I reinstalled XP and I'm stuck with it. Please suggest a way to get my old Windows 7 back.

PC configuration:



Samsung Wave 525 Menu

Think you're a search wiz?

Try your hand at Google's own trivia game, which encourages you to try Googling the answer. Head over to: <http://agoogleaday.com>

Steve Jobs autobiography

The official biography is slated to be finally out sometime early 2012

Q&A

HDD - 500 GB
RAM - 2 GB
Graphics card - NVIDIA 8600 GT
Processor - Intel Core 2 Duo

Dipanshi Gupta

🔧 We're assuming that your Windows 7 bootloader has gone for a toss. Use an application called EasyBCD to try and fix it. It's quite simple and worth a shot. Run EasyBCD and go to the "Bootloader Setup" window. Select "Install the Vista/7 Bootloader to the MBR" from the second menu, then click "Write MBR". Reboot to check.

If this doesn't work, there's always the option of re-installing Windows 7 to the new partition.

🔧 System Heating up

I have a Dell Studio 15 model-1558 laptop. Config :

Processor - Intel core i5 430 @ 2.27 GHz (Turbo Boost up to 2.53 GHz)
RAM - 2x2GB Samsung @1333MHz
HDD - Seagate ST9500420AS 500GB @7200 RPM
GPU - ATI Mobility Radeon HD 5470 1GB
OS - Windows 7 Home Premium original.

My laptop gets very hot during heavy resource usage. For example, while playing games such as GTA 4 and Age Of Empires 3 on normal settings, my system starts to lag and hang and I have to discontinue the game. The games used

to work fine for hours before I changed my motherboard. Also it gets hot during normal use too. Cooling fan is working fine but the system gets quite hot. There is no hindrance to the airflow since my battery is a 9-cell one and it elevates the laptop from the table. I had the motherboard change from Dell. The technician came to my place and changed it. My laptop is still within warranty and it will expire in June. I've attached two screen shots of the system heat monitor taken right after exiting the game. The readings are for when the air conditioner was on. This has become annoying.

Aditya Chaturvedi

🔧 If it's in warranty you should definitely have it checked out by Dell as soon as possible. Maybe there was a fault while replacing your motherboard. But if that doesn't work and since you yourself have narrowed down the problem, you should probably consider using a (external) laptop cooler. These allow for even better airflow with the help of airflow grooves and a fan or multiple fans. You can get laptop coolers in hardware shops for as little as ₹500 (Chinese imports). Good ones from companies such as CoolerMaster cost more. They draw power via USB port to run the fan.

🔧 Simultaneous OS

I have a Compaq laptop. Its configuration is as follows:

Intel Core 2 Duo 2.2 GHz
Ram 3GB
Hard Disk: 360 GB

I just want use Linux and Windows at the same time please help me.

Shafique

🔧 I would like you to clarify what you mean by saying "at the same time". If you mean to say that you would like to install both Windows and Linux on the same hard drive, and be able to boot into either while starting your computer, then that is quite easily possible.

Most Linux distribu-

tions offer some support for installing them parallel to Windows. You merely need to download the Linux distribution's ISO (or take it from our DVDs), write it to a CD, and follow the instructions. Most will recognise Windows partitions, and will offer the option to re-size existing Windows partitions to make space (or use existing free space if there is any). Your best and safest bet though would be to use the Wubi tool that allows you to install Ubuntu in parallel to Windows, from Windows. You can download it from here: <http://www.ubuntu.com/desktop/get-ubuntu/windows-installer>

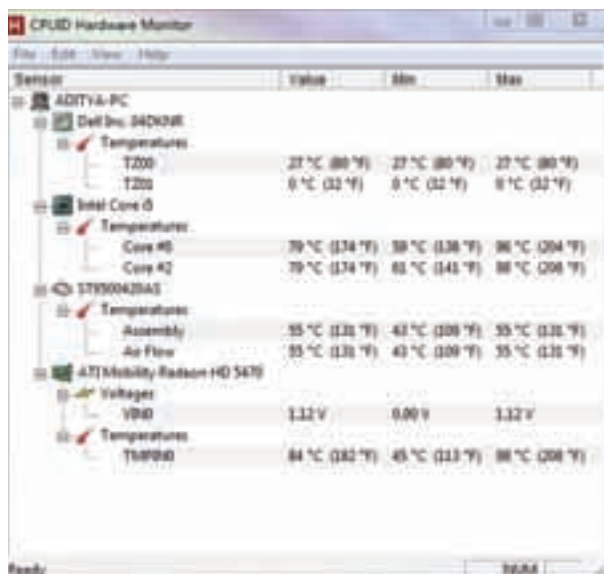
If you mean to say that you would like to run Linux and Windows at the same time (an unlikely scenario), then you will need to use a virtualization software. There are two good and free virtualization applications available: VirtualBox (<http://www.virtualbox.org/>) and VMWare Player (<http://www.vmware.com/products/player/>). Both run on Windows and Linux, run Windows in a VM on Linux or run Linux in a VM on Windows.

🔧 Lost my Edge

I have a Samsung Omnia with Windows Mobile 6.1 OS. The phone used to detect data connection on opening of IE or Opera Mini on phone. However off late I have installed a WiFi modem through which I have tried to connect to internet through the mobile. It worked fine but the problem now is that the mobile does not connect through EDGE any more (both IE and Opera) although Google Earth and YouTube work fine. I have a BSNL GPRS connection.

Krishna Dubey

🔧 The fact that the EDGE connection has suddenly stopped working is possibly because the GPRS settings (access point etc) may have been modified, either by error, or deleted altogether. Get the settings again from BSNL, and save them again. If you need to over-write any previous settings, do that. Once that is done, turn off the Wi-Fi connection, restart the phone and check if the web browsing is possible now 📶



A hot system. Literally.

Gaming Consoles: New age gaming

A newbie's guide about gaming consoles, and which one fits your requirements.

Agent 001

agent001@thinkdigit.com

A gaming console, essentially, isn't significantly different from a tricked out desktop computer. But with the specific optimisation, game developers know exactly what platform the games are being developed for, which results in the best possible performance getting eked out every single time you play.

There are cons too. Console versions of games are almost never as splendid looking as their PC counterparts, and remember that consoles of today are still off-running GPUs equivalent to the now old GeForce 7800 GTX. Additionally, console titles are typically more expensive than their PC counterparts, and while you can hack your console, patching to latest updates and such becomes a no-no. I know of people who have an Xbox 360 and PS3, combined worth around 50K, and titles worth well over

3 times than amount. Then there is the exclusivity factor – game developers will often develop a title for the PS3 and not on the Xbox 360, or vice versa, and this means that you will at times, not get a title you've been looking for on your console.

Sony PlayStation 3: The PlayStation 3 offers a package that goes well beyond the plain-Jane gaming. Motion Gaming (with the Move controllers), a Blu-ray player and the fact that it plays nice with streaming software like the PS3 Media Server. The PS3 is a device capable of being the gaming console, and the com-

plete entertainment device, in your home entertainment setup.

Speaking of games, the titles available on the PS3 are pretty similar to the ones available on Xbox. However, exclusives like Metal Gear Solid 4, God Of War III and Gran Turismo 5 are what differentiate the PS3 from the Xbox.

The motion gaming capabilities are available on the PS3, with the Move controllers. Available as a separate acces-

sory (₹3.6k), and even as a bundle with a new PS3 should you chose to buy that.

We would recommend you pick up the PS3 Slim (160GB) for about ₹19k. Upgrading the hard drive on the PS3 is an easy task, which you can do at a later date. The complete guide is provided with the user manuals. Add the Blu-ray remote (₹1.5k) to it, if you

will use it a lot for Blu-ray playback or media streaming.

If you have an Xbox, the extra investment on the PS3 isn't really justified, unless you want to play the exclusive game titles. And use the Blu-ray capabilities as well.

If you have a PS3 already, you may not want to upgrade to the PS3 Slim, since the performance gain and the reduced power consumption and heat genera-

tion isn't enough to justify another round of cash drain.

Microsoft Xbox 360: The games available for both the PS3 and the Xbox play equally well on both consoles. The performance difference is negligible, something which most televisions won't even be able to reflect. And most games are available on both platforms. Unless you want to play Halo or Forza Motorsports, that are exclusive to the Xbox platform.

While it is a very capable gaming console, it does not have a Blu-ray drive. Nor is it an excellent media-streaming device. While the PS3 is capable of being the centerpiece of the entertainment setup at home, the Xbox lags behind in that.


Motion gaming (Microsoft Kinect) arrived on this platform, the same time as on the PlayStation 3. The jury is out on whether the Kinect is better, or the PS Move.

Despite the new Xbox 360 (4GB) one hitting the market at ₹14k, we still think that the Xbox 360 with the 250GB hard drive makes more sense, and it costs about ₹21k. Or play ₹31k for the version with the Kinect bundle as a part of the package.

If you already have a PS3, then don't buy the Xbox, unless one (or more) of the exclusive titles entices you.

Nintendo Wii: This is the gaming console that had motion-based gaming available for a long time. The Wii appeals more to the first time gamers, the casual gamers and families as a whole. What the Wii lacks is HD capabilities, high-res graphics and if you like to lazily play games, then

this is for you! The game range is very basic, and some say it is "kiddish" to a certain extent. The graphics are very limited in their appeal.

The Wii console costs about ₹15k, and should be your secondary console. Or buy this if there are very young children at home, since this will be a great way to keep them busy! 



Sony PS3



FIFA 11 on Xbox 360



Forza Motorsport 3

Gingerbread on Optimus 2X

According to a Danish site, LG's dual core smartphone Optimus 2X will be updated to Android 2.3 in June or July this year.

USB 3.0 + Thunderbolt in Ivy Bridge

Intel will finally add native USB 3.0 support on the Ivy Bridge platform in 2012 alongside support for Thunderbolt

Agent 001

Economical Graphic card

I want to buy the XFX Nvidia GeForce GT 240 graphics card. My budget is around ₹5000. I checked the price on ebay and it's showing the pricing around ₹5000. Is it a good graphics card? I am running Windows 7 and want a discrete graphics solution for games like COD: Black Ops, Devil May Cry 4, GTA 4, etc. Could you please suggest me any other XFX graphics card.

Saurav Chaudhary

We would suggest you go for the XFX Radeon HD 5670 instead of the GT240. The HD5670 is a much better performer than GT 240 and even runs cooler.

Moreover, the HD 5670 supports DX11 whereas GT 240 does not. The DX11 support will make you future proof. The HD 5670 is priced under ₹5,000. You can play most of the games that you have mentioned comfortably on medium settings. At higher settings you will have to keep the AA and AF filters off to get playable rates.



HD 5670

Phone dilemma

I am having a dilemma as I have around ₹25,000 to spend and am confused as to what I should spend it on. Should I go for a top end Android based phone like the Samsung Galaxy S or should I buy a low end Android phone around ₹10,000 and spend the rest of the money on iPod Touch 4G (32 GB)? Please help me out.

Shishir Priyadarshi

A powerful smartphone, which will double up as the portable music player is the way to go according to us. You get the HTC Desire HD (₹26k) with the sleek form factor, a huge 4.3 inch touchscreen and Android 2.2 pre-installed. HTC Sense is a delight to use as well. Also, you can check out the HTC Desire Z (₹25k). This has a slightly smaller 3.7 inch touchscreen, but offers a sideways slide out QWERTY keypad. Also, you can check out the slightly old but amazing

Samsung Galaxy S. The updated version has the brilliant S-LCD display, instead of the AMOLED, and costs only ₹19k. The Samsung Galaxy S has a very nice set of earphones.

Laptop with multi-gesture trackpad

I have a firm plan of buying a laptop. I am interested in laptops that come with the multi-gesture trackpad. Preferably laptops other than Apple MacBook pros. Please suggest some models that I can consider.

Utsav Saini

Multi-touch gestures can work with most new generation Synaptics trackpads, with their new Scribe add-on. Essentially, you should buy a laptop which has a Synaptics touchpad big enough to let you to work the magic of the multi-touch gestures comfortably. If the laptop has the latest drivers installed, the Scribe add-on is installed by default. Based on your budget and specifications you can buy a laptop having the Synaptics trackpad.

But be aware, none of the "add-on" solutions for activating multi-touch capabilities on Windows based laptops work as well as the built-in feature on the MacBooks.

Gadget shopping

I want to purchase three electronic items as soon as possible. Here are my budgets for each.

- (a) Laptop within ₹45,000 for home need for internet surfing, and casual gaming
- (b) Camera for personal use. Budget: within ₹13,000.
- (c) Cellphone within ₹12,000 supporting 3G, touch screen, motion sensor and good RAM.

Manoj Kumar



IXUS 115HS

- a) For the laptop, you can buy the Dell Inspiron M501R, which is powered by a quad-core processor, and is priced under ₹40k. Gaming is very much possible on this machine, but battery life does take a hit. However, for mostly home usage, that really shouldn't be a problem.
- b) You can buy the Canon IXUS 115HS, which will cost about ₹11.6k. It is a 12MP camera, capable of recording Full HD movies and is available in multiple colours.
- c) You should check out the Samsung Galaxy Fit or the LG Optimus One P500.

Xperia Arc vs Incredible S

I needed a suggestion and some clarifications too. I want to buy an Android phone upto ₹30,000.

Which one do you recommend?

I have shortlisted two: Sony Ericsson




Xperia Arc and HTC Incredible S. I want your guidance on the following points.

- 1. Does Xperia Arc lag on pinch zoom in on home screen or in browser?
- 2. Does it slows down and lag in flipping between home screens?
- 3. Does HTC Incredible S lag in switching between photos?

I hope you would have had hands on these devices and guide me in right direction.

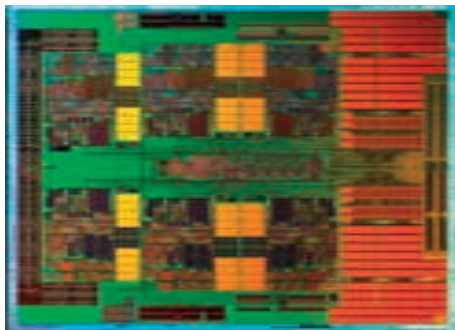
Paras

- 1. The SE Xperia arc does not lag or stutter when you 'pinch zoom' in either the photo gallery or in the web browser.
- 2. Yes, the Xperia Arc does feel a tag sluggish, with a bit of a jerky behavior when you are flipping between home screens. However, most users may not really feel that problem.
- 3. The HTC Incredible S feels fast and the interface is a lot more smooth. No lag when you flip through the photo albums, or even when working your way through the menu. 

digit KILLER RIGS

everything you will ever need to build your own PC. whatever your budget.

PRIMARY COMPONENTS



PROCESSOR

- AMD Athlon II X2 250 / ₹2,650
- AMD Athlon II X3 440 / ₹3,250
- AMD Phenom II X4 955BE / ₹6,400
- Intel Core i7 2500K / ₹11,500
- Intel Core i7 2600K / ₹16,000



HARD DRIVE

- 500GB WD Caviar Blue / ₹1,750
- 500GB WD Caviar Blue / ₹1,750
- Seagate Barracuda 1 TB / ₹2,600
- Seagate Barracuda 1 TB / ₹2,600
- Seagate Barracuda 2 TB / ₹4,700

MOTHERBOARD

- ASUS M4A78LT-M LE / ₹2,600
- Asus M4A78LT-M LE / ₹2,600
- Gigabyte GA-880GA-UD3H / ₹5,500
- ASUS P8P67 Pro / ₹12,300
- Asus Asus P8P67 DELUXE B3 / ₹15,800



GRAPHICS CARD

- None
- Sapphire HD 5670 / ₹4,400
- Sapphire Radeon HD 6850 / ₹9,900
- MSI N570 GTX / ₹19,500
- 2 x ZOTAC GeForce GTX 570 / ₹40,800



RAM

- Corsair 2GB DDR3 1333MHz / ₹1,050
- Corsair 2x2GB DDR3 1333 MHz / ₹2,800
- Corsair 2x2GB DDR3 1333 MHz / ₹2,800
- Corsair 2x2GB DDR3 1333 MHz / ₹2,800
- 3x2GB Corsair Dominator 1600 MHz / ₹9,100

MONITOR

- Dell 1920IN / ₹5,250
- BenQ G2220HD / ₹7,200
- BenQ G2220HD / ₹7,200
- BenQ G2220HD / ₹7,200
- Dell Ultrasharp U2311H / ₹14,000



■ Basic rig = ₹17,440

■ High-end Multimedia / Gaming rig = ₹44,490

■ Ultra high-end PC / Gaming rig = ₹1,26,075

■ Multimedia cum gaming rig = ₹31,840

■ High-end gaming PC = ₹65,155

SECONDARY COMPONENTS

CABINET

- Zebronics Bijili w/o SMPS / ₹1,100
- CM Elite 310 / ₹1,500
- CM Elite 430 / ₹2,475
- NZXT Lexa S Mid-Tower / ₹4,500
- Cooler Master HAF912 / ₹5,800



SOUND CARD

- None
- None
- None
- None
- ASUS Xonar DX 7.1 / ₹4,740



POWER SUPPLY

- VIP 350 Watts / ₹800
- Corsair CX400 / ₹2,800
- Cooler Master eXtreme 500W / ₹2,910
- Cooler Master GX550 / ₹4,340
- Corsair HX850 / ₹9,450



SPEAKER

- None
- Altec Lansing V2621 / ₹1,900
- Altec Lansing V2621 / ₹1,900
- Creative Inspire T6160 / ₹3,400
- Creative Inspire T6160 / ₹3,400



MOUSE

- Microsoft P58 / ₹375
- Microsoft P58 / ₹375
- Logitech MX518 / ₹1,200
- Logitech MX518 / ₹1,200
- Razer Death Adder / ₹2,200



OPTICAL DRIVE

- LG 22x SATA DVD Writer / ₹950
- LG 22x SATA DVD Writer / ₹950
- LG 22x SATA DVD Writer / ₹950
- LG 22x SATA DVD Writer / ₹950
- LG 10x Blu ray RW / ₹9,400



KEYBOARD

- Logitech K100 / ₹265
- Logitech K100 / ₹265
- Logitech K100 / ₹265
- Microsoft Comfort Curve 2000 / ₹1,000
- Razer Arctosa Gaming Keyboard / ₹2,250



MISCELLANEOUS

HD MEDIA PLAYERS

- ASUS O!Play Mini / ₹4,400
- WD Live TV Hub / ₹11,500
- Xtreamer Pro / ₹12,500



GAMING HEADSETS

- Platronics Gamecon 367 / ₹1,700
- Alienware TactX Headset / ₹3,500
- Corsair HS1 / ₹4,999



PORTABLE DRIVES

- Seagate Expansion Pocket 250GB / ₹1,950
- WD Passport 500GB / ₹2,950
- Iomega 3Go 1 TB USB 3.0 drive / ₹6,500



MOUSEPAD

- Razer Goliathus / ₹450
- Cooler Master Storm CS-M / ₹850
- Razer Goliathus Fraggd Control Edition / ₹999



GAMING CONSOLES

- Sony PlayStation3 (320GB) with Move / ₹23,490
- Xbox 360 (250GB) with Kinect / ₹31,980
- Nintendo Wii Black / ₹18,990



POWER PROTECTION

- APC (BR600CI-IN) / ₹2,165
- Numeric SB1000 / ₹4,700
- APC (BR-1000IN) / ₹5,500



Virtual deep sea diving

Google earth will soon enable one to take high definition virtual deep water trips as it will get data from Virgin Oceanic's submarine dives

SPEND SMART

Updated prices of Laptops, Cellphones, Camcorders and MP3 Players

Laptops						
Brand	Model	Market Price	CPU Type	OS Version	Memory Capacity	Capacity
Acer	AS 5742G	44138	Intel Core i5	Win 7 HP	4 GB	500 GB
Acer	AS 4820TG	47348	Intel Core i5	Win 7 HP	4 GB	500 GB
Asus	A42F-VX237D	26590	Intel Pentium	DOS	2 GB	320 GB
Asus	X8AIE-VX106D	26750	Intel Dual Core	DOS	2 GB	320 GB
Asus	A42 SeriesF-VX130D	31859	Intel Core i3	DOS	2 GB	500 GB
Asus	U45JC-WX016X	57111	Intel Core i3	Win 7 Pro	4 GB	320 GB
Asus	N53JG-SX045V	58181	Intel Core i5	Win 7 HP	4 GB	500 GB
Asus	U43JC-WX057V	61044	Intel Core i3	Win 7 HP	4 GB	500 GB
Asus	N53JQ-SZ103V	67017	Intel Quad Core i7	Win 7 HP	4 GB	640 GB
Compaq	WZ040PA	31351	Intel Core 2 Duo	Win 7 HB	3 GB	320 GB
Compaq	620-Win7HB	32421	Intel Core 2 Duo	Win 7 HB	2 GB	320 GB
Compaq	621-DOS	36476	Intel Core 2 Duo	DOS	2 GB	320 GB
Dell	Mini 10	18672	Intel Atom	Win 7 Starter	1 GB	250 GB
Dell	Mini 10	20330	Intel Atom	Win 7 Starter	2 GB	250 GB
Dell	1015	27285	Intel Core 2 Duo	Linux	2 GB	320 GB
Dell	3500	39055	Intel Core i3	DOS	2 GB	250 GB
Dell	15R	40553	Intel Core i3	Win 7 HB	4 GB	320 GB
Dell	ALNW M17X	231351	C2X	Win 7 Ultimate	8 GB	1 TB
HP	XT795PA	40874	Intel Core i3	Win 7 HB	3 GB	320 GB
HP	XB777PA	40981	Intel Core i3	Win 7 HB	3 GB	320 GB
HP	XV676PA	40981	Intel Core i3	Win 7 HB	3 GB	320 GB
HP	XV677PA	40981	Intel Core i3	Win 7 HB	3 GB	320 GB
HP	dv6-3124TX XV700PA	61204	Intel Core i7	Win 7 HP	4 GB	640 GB
HP	DM3-1131tx	61418	Intel Core 2 Duo	Win 7 HP	4 GB	500 GB
HP	XB775PA	61953	Intel Core i5	Win 7 HP	3 GB	500 GB
Lenovo	B460 59-042913	34240	Intel Core i3	DOS	3 GB	320 GB
Lenovo	59-052056	35043	Intel Core i3	DOS	3 GB	320 GB
Lenovo	Z-460 59-045596	35417	Intel Core i3	DOS	3 GB	500 GB
Lenovo	Z-560 59-051886	40660	Intel Core i3	Win 7 HB	3 GB	500 GB
Lenovo	Z560 59-052666	41035	Intel Core i5	Win 7 HP	3 GB	500 GB
Lenovo	59-052668	44512	Intel Core i5	Win 7 HP	3 GB	500 GB
Lenovo	Y-460 59-033943	54035	Intel Core i5	Win 7 HP	4 GB	500 GB
Lenovo	Y-560 59-051026	54142	Intel Core i5	Win 7 HP	4 GB	500 GB
MSI	GX400	42800	Intel Centrino 2	DOS	4 GB	320 GB
MSI	GX400	44940	Intel Centrino 2	Win Vista HP	4 GB	320 GB
MSI	GX400	45529	Intel Centrino 2	Win Vista HP	4 GB	320 GB
MSI	FX400	48979	Intel Core i5	Win 7 HP	4 GB	500 GB
MSI	FX600	51788	Intel Core i5	Win 7 HP	4 GB	500 GB
MSI	GX620	61793	Intel Core 2 Quad	Win Vista HP	4 GB	320 GB
Samsung	NP-N150-JP0G	17334	Intel Atom	Win 7 Starter	1 GB	250 GB
Samsung	NP-NF210-A05	21293	Intel Atom	Win 7 Starter	1 GB	320 GB
Samsung	NP-R430-JA06	25145	Intel Dual Core	Win 7 HB	2 GB	320 GB
Samsung	NP-RV508-A01IN	25145	Dual Core T4500	DOS	2 GB	250 GB
Samsung	NP-R439-DA0BIN	36327	Intel Core i5	DOS	3 GB	500 GB
Samsung	R430	37985	Intel Core i3	Win 7 HP	4 GB	320 GB
Samsung	R580-JT01-IN	41730	Intel Core i3	Win 7 HP	4 GB	500 GB
Samsung	R480	45368	Intel Core i3	Win 7 Pro	4 GB	500 GB
Samsung	NP-R580-JT02IN	47294	Intel Core i5	Win 7 HB	4 GB	500 GB
Sony	VPCEB3AGG	53019	Intel Core i5	Win 7 Pro	4 GB	320 GB
Sony	VPCEB33GN	53313	Intel Core i3	Win 7 Pro	3 GB	320 GB
Sony	VPCEC35FG	66073	Intel Core i5	Win 7 HB	4 GB	1 TB
Toshiba	C650-P5210	28355	Intel Pentium	Win 7 HB	3 GB	320 GB
Toshiba	L640-I4010	31565	Intel Core i3	DOS	2 GB	320 GB
Toshiba	C650-I5011	32100	Intel Core i3	DOS	3 GB	320 GB
Toshiba	L640-I4011	32100	Intel Core i3	DOS	2 GB	320 GB
Toshiba	L640-I4012	32100	Intel Core i3	DOS	2 GB	320 GB
Toshiba	L650-X5310	43870	Intel Core i5	Win 7 HP	4 GB	500 GB
Toshiba	A11-I5530	54570	Intel Core i3	Win 7 Pro	3 GB	320 GB

US military eyes Iphone and android devices

The US military is considering deploying commercial smart phones on field but want full disk encryption



Powered by

Price watch

Camcorders

Brand	Model	Market Price	Optical Zoom	LCD Size
Canon	FS305	14630	37x	2.7 in.
Canon	FS36	20614	37x	2.7 in.
Canon	SX20 IS	24530	12x	2.5 in.
Canon	HF R17	32175	20x	2.7 in.
Canon	HF R18	42020	20x	2.7 in.
Canon	HF M300	44110	15x	2.7 in.
Canon	HF M31	53900	15x	2.7 in.
Canon	HF S200	61490	10x	3.5 in.
Canon	HF S 21	85140	10x	3.5 in.
Kodak	ZX3	7508	-	2.0 in.
Kodak	Zi8	9350	Any	2.7 in.
Kodak	Zi8	9350	Any	2.7 in.
Nikon	P500	21882	36X	3 in.
Samsung	C20	10118	10x	2.7 in.
Samsung	F40	12155	52x	2.7 in.
Samsung	F44	14179	52x	2.7 in.
Samsung	K40	14332	52x	2.7 in.
Samsung	F30	14636	34x	2.7 in.
Samsung	K44	16205	52x	2.7 in.
Samsung	F33	17217	34x	2.7 in.
Samsung	K45	19638	52x	2.7 in.
Samsung	H200	20246	20x	2.7 in.
Sony	DCR-SX20EK	12787	37X	2.7 in.
Sony	DCR-SX44E/R	15345	60x	2.7 in.
Sony	DCR-SX44E/S	15345	60x	2.7 in.
Sony	DCR-SX44E/L	15345	60x	2.7 in.
Sony	DCR-SX63E	17408	60x	2.7 in.
Sony	DCR-SR68E	20460	60x	2.7 in.
Sony	HDR-CX110E	23620	25X	2.7 in.
Sony	DCR-SR88E	24558	60x	2.7 in.
Sony	HDR-CX150E/B	30250	25x	2.7 in.
Sony	HDR-CX150E/R	30250	25x	2.7 in.
Sony	HDR-XR150E	39600	25x	2.7 in.
Sony	HDR-XR550E	59400	10x	5.0 in.

MP3 Players

Brand	Model	Price	Memory Capacity
Cowon	iaudio E2	2915	4 GB
Cowon	iaudio 9	5555	4 GB
Cowon	c 4	5555	4 GB
Cowon	V5	13970	16 GB
Cowon	J3	16940	32 GB
Cowon	X7	17435	2 GB
Cowon	V5	17435	32 GB
Creative	ZEN MOZAIC EZ	3960	4 GB
Creative	ZEN X-Fi2	10835	16 GB
Philips	Ariaz	4510	4 GB
Philips	OPUS	6353	8 GB
Philips	CAM	6468	8 GB
Philips	SA5245BT	6930	4 GB
Philips	MUSE	8201	8 GB
Sony	NWZ-E353/R	4950	4 GB
Sony	NWZ-E353/B	4950	4 GB
Sony	NWZ-443	5192	4 GB
Sony	NWZ-444	6930	8 GB
Sony	NWZ-A844	8667	8 GB
Sony	NWZ-A844	8667	8 GB
Sony	NWZ-A845	11556	16 GB
Touchmate	MP48GZN	3575	8 GB
Transcend	TS4GMP860	4675	4 GB
Transcend	TS8GMP860	5363	8 GB
Zebronic	D-ZEB SIGMA	908	2 GB
Zebronic	D-ZEB SIGMA DJ	1320	2 GB
Zebronic	D-ZEB SIGMA DJ PLUS	1320	2 GB

Cellphones

Brand	Model	Price	GPS	Camera(Primary)
Acer	liquid e ferrari	24745	Yes	5.0 MP
BlackBerry	Curve 8520	9999	No	2.0 MP
Blackberry	9100 PEARL	12827	Yes	3.2 MP
BlackBerry	Pearl 3G 9105	13837	Yes	3.2 MP
BlackBerry	Bold 9780	25705	Yes	5.0 MP
Blackberry	Torch 9800	28987	Yes	5.0 MP
Dell	XCD28	7826	Yes	3.2 MP
Dell	XCD35	13836	Yes	3.2 MP
Dell	Venue	28784	Yes	8 MP
Dell	Venue Pro	32016	Yes	5 MP
HTC	Smart F3188	8666	Yes	3.0 MP
HTC	Wild Fire	13803	Yes	5.0 MP
HTC	Desire Touch	23129	Yes	5.0 MP
HTC	HD7	28583	Yes	5.0 MP
LG	GD510	6464	No	3.0 MP
LG	GS500v Cookie Plus	6767	No	3.2 MP
LG	KS660	9141	No	5.0 MP
Micromax	Q50	3384	No	2.0 MP
Micromax	Q75	3889	No	3.2 MP
Micromax	X510 Pike	4040	No	2.0 MP
Micromax	Q7	4116	No	2.0 MP
Micromax	Q6	4343	No	2.0 MP
Micromax	X550 Qube	4343	No	2.0 MP
Micromax	Q55 Bling	4823	No	2.0 MP
Micromax	A60	6742	Yes	3.2 MP
Micromax	Modu T	10100	Yes	5.0 MP
Motorola	Charm MB502	13130	Yes	3.0 MP
Motorola	MILESTONE	21816	Yes	5.0 MP
Nokia	X2-01	3882	No	VGA
Nokia	X2	4855	No	5.0 MP
Nokia	C3	5826	No	2.0 MP
Nokia	X3	6541	No	3.2 MP
Nokia	C5	7309	Yes	3.2 MP
Nokia	C6	13130	Yes	5.0 MP
Nokia	C6-01	16668	Yes	8 MP
Nokia	E72	16673	Yes	5.0 MP
Nokia	E72	17626	Yes	5.0 MP
Nokia	C7	18102	Yes	8.0 MP
Nokia	N97	22867	Yes	5.0 MP
Nokia	N8	23821	Yes	12.0 MP
Olive	V-G400	3434	No	2.0 MP
Olive	V-G500	3636	No	2.0 MP
Olive	V-GC800	5202	Yes	2.0 MP
Samsung	Chat 322	4343	No	1.3 MP
Samsung	Galaxy 5	8939	No	2.0 MP
Samsung	Corby Pro B5310	9898	Yes	3.0 MP
Samsung	Omnia Pro B7320	11615	Yes	3.0 MP
Samsung	Galaxy 3	11715	Yes	3.0 MP
Sony Ericsson	Xperia X10 Mini	11969	Yes	5.0 MP
Sony Ericsson	Xperia X10 Mini	12575	Yes	5.0 MP
Sony Ericsson	Xperia X8	13080	Yes	3.2 MP
Sony Ericsson	Xperia X10 Mini Pro	14090	Yes	5.0 MP
Sony Ericsson	Aino Classic	17165	Yes	8.1 MP
Sony Ericsson	Vivaz	18029	Yes	8.1 MP
Sony Ericsson	Vivaz Pro	21059	Yes	5.1 MP
Sony Ericsson	Satio	23180	Yes	12.1 MP
Sony Ericsson	Xperia X10	24735	Yes	8.1 MP
Spice	M-6000	3964	No	2.0 MP
Spice	G-6500	4343	No	1.3 MP
Spice	QT-56	4444	No	2.0 MP
Spice	M-7070	5227	No	5.0 MP
Videocon	V1655	4742	No	2.0 MP
Videocon	V1688	6893	No	2 MP
Videocon	V7500	11110	Yes	5 MP

Blu-ray

All you need to know about Blu-ray:
<http://bit.ly/i8hUHP>

Optimus range

LG announces top-end Android smartphones
 for India - Optimus 2X and Optimus Black

Be the vigilant consumer

We tell you about the perils of IVRS activated services

Kapil Rustagi

readersletters@thinkdigit.com

Anu, a Delhi-based professional was taken aback on seeing her latest monthly telephone bill sky-rocketing. On close scrutiny, she realised she was charged almost ₹500 per month towards BlackBerry services. The interesting part is that she doesn't even own a BlackBerry, neither did she request for BlackBerry services. However surprising this may be, Anu's case is not an isolated one.

In these days of automation and interactive voice response systems (IVRS), you'll most definitely have received calls guiding you through a voice menu

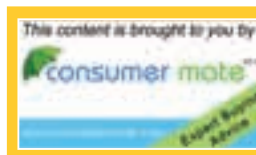
that requires you to press a few buttons. Inadvertently, it's quite likely you would've pressed a few wrong keys. To add to consumers' agony, on complaining, the service provider hardly pays any heed to it. In the absence of any proof to substantiate their side of the story, consumers are rather rendered helpless. Non-payment penalties and threats of discontinuation of services add to the frustration, only adding to the profits of mobile service companies.

Complaints can be lodged with the respective nodal officer of the mobile service company. There are official guide-

lines issued by various judicial forums and the Telecom Regulatory Authority of India (TRAI) to curb the growing menace. Despite such restrictions and guidelines, companies through marketing agencies or otherwise use tactics to dupe consumers. You can lodge a complain against the erring service providers with TRAI as well. The web site of TRAI (trai.gov.in) is a useful resource to know about telecom issues and current guidelines issued for benefits of the consumer.

It is advisable not to subscribe to any added feature via marketing calls, as marketing agencies could activate additional features to earn their commission. Such services should prefer-

ably be activated from the authorised centres of the mobile service company to avoid any such untoward situation that you will have to deal with later. **[1]**



We can help!

If you're facing a problem with your purchase, write to us at help@consumermate.com

COMPLAINTS RECEIVED

Sony Ericsson Vivaz Pro malfunctioning

Question: I bought a new Sony Ericsson Vivaz Pro on December 23, 2010. Its standby time was pathetic and so I got the battery replaced at the showroom itself, on December 29, 2010. Later, I faced another problem - the phone happens to require charging twice a day and so I gave my mobile to Sony service centre in the month of January. After two days they rectified the problem (they say) and returned it back to me. After two or three weeks, I got a problem in voice quality and hanging. So on February 23, 2011 I gave it again to the service centre. Within two months, I encountered similar problems thrice. I need a solution for this, most likely a replacement. The cost of Mobile is ₹21,000. I can provide recent reference number for the service centre visits.

Contacted By: Bharani kumar

Dear Consumer,

I am presuming that this phone was sold to you on the condition, or the representation, that it would work for such time and in manner as you have explained. If that is the case, you can put a challenge to the dealer and the company. As stated by you in your complaint, this is a case where the product was having an inherent manufacturing problem. There are deficiencies in the service on the part of the dealer and the company. You have to take legal action to put them in motion. Do not feel cheated as you can very well take legal action by complaining in the district consumer forum. The thing which I can suggest at this stage is that in the first instance write a registered letter containing all the details of your complaint. In case they do not come up with a solution, then you may go ahead with complaint in the district forum. I hope some

sense will prevail over them at the stage of notice itself and they will sort out the things. And, yes maintain a record of communications which may be necessary in future as evidence. We understand that it may tough for you to go to consumer forum, but sometimes even filing the complaint is sufficient to move them.

My Nokia N97 is not working fine

Question: I bought a Nokia N97 in September 2010. Since then, I have visited Nokia Care several times regarding many problems, such as: low signal strength, no signal where other mobiles on same network get full coverage, battery drain, buttons not working. My software has been updated thrice and my batteries changed twice. I have maintained a record of the job sheet numbers. I need a replacement.

Contacted By: Ankur Nagpal

Windows 8

Windows 8 screenshots show Metro-style login screen, Ribbon-style interface
<http://bit.ly/gUm11c>

Nokia handsets

Two new Symbian 3 phones spotted:
Nokia T7-00 and E6-00
<http://bit.ly/fgcc9N>

Consumer protection

COMPLAINTS RECEIVED

Answer By Consumermate:

Dear Consumer,
We must appreciate that you are aware of your valuable rights. This again an example of bad service of company which makes tall claims and does nothing when it comes to services and support to the consumer. It seems that your product may have some inherent problems which is creating problem again and again. You can write to the company detailing all your problems and tell them that otherwise you will be constraint to take legal action at their own cost and responsibilities. Keep a record of all communication. Keep of record all the communication and job sheets which will be crucial if you go for a complaint in the district consumer forum.

Phone trouble

Question: I am using a G365 handset for the past four months. My mobile has

been having these problems:

- 1) SD card was not working ,
- 2) Battery back up is really poor
- 3) GPRS was not working.

Contacted By: Shankar

Answer By Consumermate:

Dear Consumer,
Your problem is similar to the first two quoted above. Please refer to them and follow the same advice. You can write to the company detailing all your problems. Send written communication and it is likely your problem will get solved.

Phone not returned in time

Question: Even after keeping my mobile with the service centre for two months, the company could not repair my mobile which is under warranty. The mobile is still with the service centre. Because of this I am obviously facing lots of problems

Contacted By: Abhilash S

Answer By Consumermate:

Dear Consumer,
Please give us more information so as to enable to help you in a constructive way. The company in no circumstances can hold you waiting like this for giving back your product. It has to be returned back in a reasonable time. You can wait for another one week.
The thing which we can suggest you at this stage is that in the first instance write them a registered letter containing all the details of your complaint. In case, they do not come up with a solution then you may go ahead with complaint in the district forum. I hope some sense will prevail over them at the stage of notice itself and they will sort out the things.
And, yes maintain a record of communications which may be necessary in future as evidence. Remember your rights as a customer. Hold these companies responsible.

HURRY!

SAVE MONEY

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Industry Connect

We chat with the big wigs from major technology companies to bring you insider info

Status

Was the word and inspiration that inspired Jack Dorsey to design twitter

Hanu Prateek

readersletters@thinkdigit.com

Rich internet applications, or RIAs, in simpler terms are web applications that work like full-fledged desktop applications in many ways. They are delivered to the user through a site specific browser either through a plug in or virtual machine. With more and more services moving to the cloud and with increased internet connectivity RIA development is highly 'in demand'. RIAs provide robust ways of interacting with the users with way more efficiency

than ever before. As a simple example traditional applications generally tend to be limited to form fields, radio buttons, and check boxes whereas RIAs can allow the user to perform in-line editing, drag and drop items or otherwise interact directly with the elements. Popular browser-based RIAs include Flickr, Google Maps, and eBay, desktop like RIAs include Twhirl and Tweetdeck, both of which interact with the Twitter web site, and enterprise applications such as Accelerate4Pharma, a pharmaceutical application.



A career in RIA development is becoming increasingly relevant and sought after. With the increasing penetration of the social web among the masses,

RIAs dominate in the online gaming industry as well as in applications such as video, sharing and recording. Development of new technologies and web standards such as HTML5 and JavaScript based widgets are set to provide solutions for mobile web

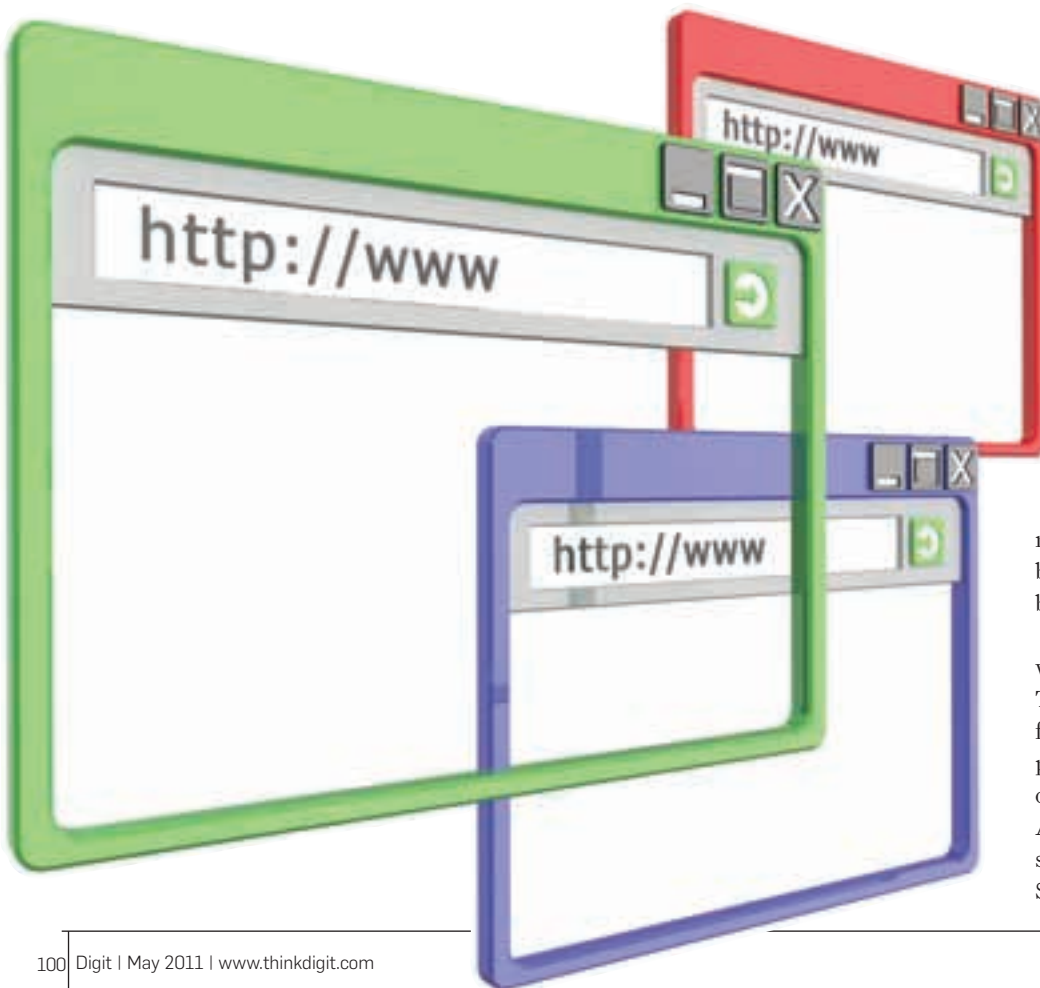
experiences and are also on the rise fueling the need for new creative developers adept with RIA knowledge. As a developer familiar with RIA technologies, you can have a career ensured with top class placement in the programming and IT industry. With the increasing depend-

CAREERS IN RIA DEVELOPMENT

What is RIA? Can one look forward to a career in RIA development as a tempting prospect? It begs us to think about the opportunities available and what the future holds for RIAs and its developers

ency on building and developing content for browsers, desktops and mobile platforms, this sort of talent is being sought after with great demand by all modern IT and web companies.

Frameworks are the platforms on which an RIA is built and deployed. There are a lot of different RIA frameworks. One of the biggest such platform for RIA development is offered by Adobe which includes Adobe Flash, Flex and AIR. Another such framework by Microsoft is Silverlight, which is available for



Webby Awards

The nominees are announced and guess who is on the list? Strangely Justin Bieber and Angry Birds get featured.

Apple's three weaknesses

According to an article on CNN, they are - The Cloud, Social, and The living room. Go figure.

Work @ Tech

multiple browsers, including Firefox and Safari, and the Windows and Mac OS X operating systems. There is also an open source Silverlight project for the Linux operating system. Curl is another RIA framework designed for business use. Curl does not focus on graphics and advertising, rather on applications that integrate with business data systems. Apart from these, other important RIA frameworks include Google Web Toolkit, JavaFX, Mozilla Prism and OpenLazlo.

RIA development can be done through a variety of frameworks and technologies. For coding the back end part of the application, you can make use of programming languages like Java, ColdFusion, PHP, Rails, .NET, etc. For the client side you can use established MVC frameworks including Flex/ActionScript and Ajax, some emerging ones for Silverlight, and adapted Java frameworks for JavaFX. The primary quality for a developer is the ability to be able to define the needs and capabilities of your application well if you want to determine both the back end and the front end application architecture well.

Irrespective of which RIA technology you might be using or learning to use, be it Flex, Ajax, JavaFX, Silverlight, or any other RIA technology, there is

a similarity in the architecture in that most typically there will be a stateful client application and a backend layer of separate services. Success in designing and building a rich internet application would depend a lot on how well this differentiation is understood and taken care of. RIA developers starting off see a salary upward of ₹10,00,000 per annum. An experienced senior technical lead can get anywhere up to ₹20,00,000.

In today's global business environment, where customers are more demanding than ever and brand loyalty is

increasingly difficult to obtain, deeper customer engagement is integral to an organization's success. RIAs tend to make these customer interactions more compelling, engaging, dynamic, and useful. Business executives increasingly recognize the value customer



This chart describes where RIAs fit in the scheme of things

engagement brings to their businesses. For example, in a recent study on engagement conducted by the Economist Intelligence Unit on behalf of Adobe, 80 per cent of executives said that better engagement translates into improved customer loyalty, and 75 per cent said they believed



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Howard Stringer

The CEO of Sony lets it slip that his company will be making image sensors for Apple's iPhone 5

A city called Google

In an effort to suck up to Google, the city of Topeka officially changed its name to Google. Though only for a month.

it meant higher profits. Engagement is also critical to transforming customers into active advocates for brands and businesses; 79 per cent of respondents said that engaged customers will recommend products and services to others.

'The Business Case for Rich Internet Applications', a report published after extensive interviews with RIA technology providers and designers as well as clients and customers by Forrester revealed that "well-designed RIAs can produce eye popping results that can help prove the value of current investments and make the case for future RIA projects." According to the findings, "firms that measure the business impact of their RIAs say that rich applications meet or exceed their goals." Specific findings demonstrate that improved ease of use for customer facing RIAs "drives higher conversion rates and order size. More shoppers convert to buyers when they can easily trade off product

options and costs in real time. And because of increased ease of completing complex orders online, fewer customers give up." Additionally, the ability for RIAs to incorporate rich media pays dividends. "Rich media helps boost margins. RIAs not only enable better configurations, they also allow firms to embed video and other contextual help content into applications. Users who access these types of help features convert at a higher rate than those who don't."

YouTube is one of the biggest examples of the success of RIA technologies. It is increasingly delivering full length movies and live streaming events, and doing this without any issues or interruptions often requires fine control over buffering and dynamic quality control. Kuan Yong, platforms product manager for Google's YouTube, says that despite his company's efforts to make YouTube



videos run in an HTML5 player, Flash isn't going anywhere.

"Flash Player addresses these needs by letting applications manage the downloading and playback of video via Actionscript in conjunction with either HTTP or the RTMP video streaming protocol," explains Yong. "The HTML5 standard itself does not address video streaming protocols, but a number of vendors and organizations are working to improve the experience of delivering video over HTTP." YouTube also has to offer copy protection for some videos, like YouTube Rentals. The Flash Platform's RTMPE protocol is compatible with copyright protection technology, but HTML5 is not. Flash also remains the preferred option for video embedding. In conjunction with Google's decision to bake Flash support into its Android devices, Flash doesn't appear to be going anywhere anytime soon.

None the less the iPhone and iPad put Flash and any plugin based RIA application in general in a bad spotlight. Apple's side of the story is that Flash is a low performance, insecure, battery life drainer. Steve Jobs has been quoted in some articles as saying that Adobe programmers were "lazy" because they did not improve Flash. But despite its popularity this is not an issue only restricted to Flash but all plug in based RIA frameworks. Microsoft Silverlight and Java are also affected by many of the issues effecting Flash. None of these run on the iPhone or iPad today. HTML5 though is hailed as the future of the Web and RIA development. But it could take a very long time for it to be mature enough for extensive use. HTML5 is large and complex, and if we are to trust the current projections by the people working on this particular spec like Ian Hickson of Google and David Hyatt of Apple, for all parts to be finished it would be the year 2022, some 18 years after the process started in 2004.

However, some Web sites are already using if not the complete spec but a subset of HTML5. For example, YouTube and Vimeo have already rolled out use of the video element in HTML5. The working subset of HTML5 is nowhere near the



Vudu, an RIA.

Questions on Facebook

After nearly a year of beta testing, Facebook released a new version of its question tool.

Want to be a YouTube sensation?

Head over to the following link and get five tips on how to be famous: <http://bbc.in/digit123>

Work @ Tech

power of Flash. There are many advanced effects that are only available in Flash, Silverlight or Java. For example, Google, which is driving HTML5, relies on Flash in Google Maps for the Streetview and in Gmail for the multiple file upload capability. There are tens of thousands of Flash games on the Web or as game apps within Facebook. This wouldn't be possible with HTML5 anytime soon.

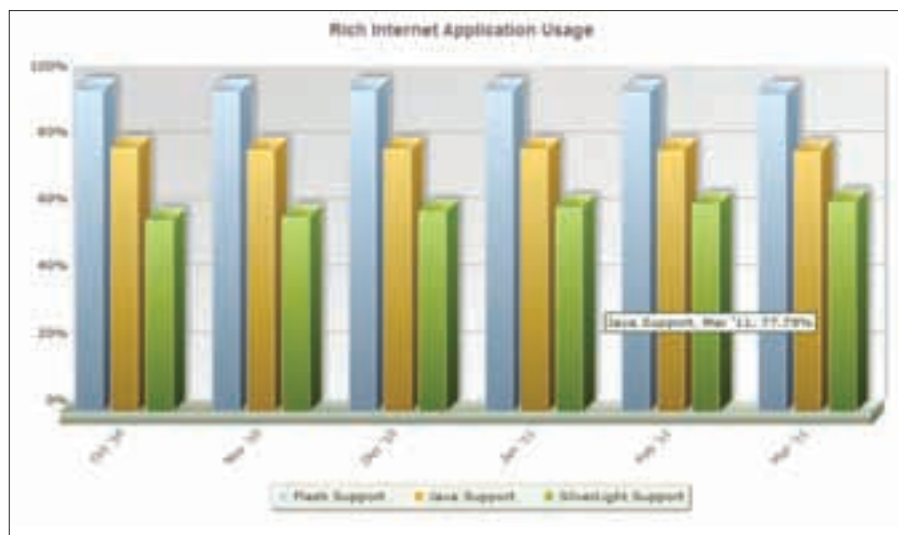
It's not just about features, but also about deployed infrastructure that favour Flash. A pragmatic perspective should look at the numerous tools, ad engines, business processes, infrastructure and platforms that support and/or enable Flash-based advertising. This aggregate mass will take a long time to shift to an alternative, no matter how good that alternative may be, due to sheer inertia of large scale systems that are operationally functional.

HTML5 is the future of the web, for simple interactivity, including charting,

some limited 3D vector graphics, image transforms, video, audio. It is possible



OpenLaszlo



Usage stats for RIAs

that 90 to 95 per cent of an average enterprise needs could be met by HTML5

There are only a few classes of corporate apps that would gain significant benefit from Flash, Silverlight or Java over what is available in HTML5 or even in Ajax.

Learning RIA technologies has never

been easier. With all these companies trying to promote the use of their own technologies, there are innumerable resources available online either by Adobe, Microsoft or other open source communities. With the right creative and technical knowledge and prowess getting yourself hired in this area could be very easy and exciting.

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Happy birthday FTP !!

File Transfer Protocol written by Abhay Bhusan officially turned 40 years old on 15th April 2011

IPv4 addresses running out

The Asia Pacific Network Information Centre (APNIC) will be rationing out its last block of IPv4 addresses as it ran out of them earlier than anticipated

THE SCIENCE OF SOUND

Apoorva Awasthy from Texas Instruments gives sound bytes

Q What are the trends that you observe in consumer audio systems these days?

- There's an increase in the demand for high quality audio
- There's also an increased demand for 2.1/5.1 sound bar systems, due to an increase in the adoption of flat panel displays
- Applications such as noise cancellation in mobile phones, higher loudness in portable audio systems are also getting popular
- Personalised home theatre systems with industry-standard decoding algorithms
- Wireless Speakers

Q How different are commercial audio systems (used in conference halls and theatres) from end users?

Commercial audio systems in theatres have higher number of channels, higher RMS output, higher sampling rates and higher fidelity. These systems have advanced room equalization algorithms resulting in better audience experience. The audio content in these systems is pre-encoded for multi-channel format such as Dolby and DTS.

Texas Instruments' (TI) end equipment solutions for audio applications integrate best-in-class systems expertise, providing increased application flexibility, higher performance and design longevity. TI is committed to providing the silicon, software, application knowledge and local technical support to help customers get to market faster.

Q What differentiates a good audio system from a conventional one?

There are a couple of features which differentiate a good audio system like:

- Higher fidelity
- Speaker response
- Higher sampling rate (>96 KHz). E.g –



Apoorva Awasthy, Business Development Manager, High Performance Analog (HPA), Texas Instruments India.

High-definition DVDs/Blu-ray discs

- Higher dynamic range - A good quality audio system should be able to accurately reproduce both quiet and loud sounds.
- Signal to noise ratio (SNR) – A high SNR is desired to reduce any background noise such as a hiss.
- Total Harmonic Distortion (THD) - A good system should have a very low THD.

Q Is it possible to enhance audio by means

of software? Any tips for our readers on how they do that?

Yes it is possible to enhance audio by means of software. The demand for portable consumer electronics is increasing rapidly. Obtaining good audio quality from a small portable consumer electronic device is a challenge that can be addressed using audio processing algorithms. These algorithms help in improving the audio quality of compressed audio files. A variety of algorithms are available today to process the

Skype for Android vulnerable

Profile data and instant messages stored in Skype on Android devices could be stolen by malicious third party code

Google concerned privacy

Google to implement mobile user privacy through double anonymisation, easy opt-out's and in-app notices

Industry Connect

audio signal and improve the listening experience. Some of them are listed below.

Basic processing algorithm such as equalization (EQ)
Bass Boost algorithm improve bass response of small speakers
Virtualization algorithms increase the size of the audio field and are able to effectively create virtual surround sound even from smaller portable devices.

What are the factors one needs to consider before buying an audio system?

Consumers in India look for audio quality, formats the system can play, support for decoding, cost, ease of installation.

Are the high prices for supposedly audio-ophile-grade audio equipment justified?

High-end audio equipments have the highest standards such as SNR, THD and sampling rates that ensure a rich user experience. These features require complex digital signal processing, state of art data converters and amplifiers.

How has semiconductors changed this field?

Consumers demand the best performance in their audio products. They want crystal-clear sound wherever they are - in whatever format they want to use. We provide technology that enhances the listener's audio experience, offering high performance, unparalleled integration and design flexibility. Our program-mable components help you build audio systems with true, life-like sound and broad functionality at a competitive cost.

High-quality digital audio formats such as lossless HD found on Blu-ray discs present AV receiver system designers with many engineering challenges. Digital connectivity, content protection, compatibility with new decoding standards and the need for fast data rates with superior analog performance throughout the entire audio signal chain require careful attention to semiconductor device selection, power supply design and PCB layout. This is where we play an important role.

Shouldn't price be reducing with semiconductors?

Cost is driven by performance

IMAGINE IMATION

Imation plans a serious India foray. Here's the info on some of their short and long term initiatives.

It's been a while since we've heard about Imation. What has it been up to?

Imation has transformed in to a global technology company. We are currently the global leaders in branded optical media category (CDs and DVDs). We also ventured in to Blu-ray discs. Imation has also extended its reach in IT and computer accessories such as keyboards, mice, web cams and speakers. Apart from its legacy in backup storage tapes, we also have hard disk-based backup storage such as RDX.

Can you shed some light on the dynamics of the optical storage media industry?

The Indian optical market is very dynamic. With the growth and penetration of laptop and desktops across India, storage requirements is also increasing at a rapid rate. However, since last year, the trend in optical sales is going down with the price of flash drives and hard disks dropping drastically and capacities increasing. Imation has launched its latest Defender series of CDs and DVDs having password protection and encryption facility that will help the customer to save and protect its data, and we feel such value added features will help us play a key role in India.

Since Imation is planning a strong foray into the Indian market, what can we expect?

The Indian market is crucial for Imation, and we have a line-up of new products. This includes the latest launch



Kiran Nair, Country Leader, Imation India

of Defender series of Imation CDs and DVDs with encryption features such as password protection, and other similar encryption features. The Defender series Flash drives and hard disks with biometric feature and FIPS certified products have also been launched. Our range of PC accessories that includes PC headphones, mice, keyboard combos, and web cams is also doing good.

Will Imation diversify into other product categories to gain a strong foothold in this price sensitive market?

Yes, we are looking forward for various options and will be launching the same soon.

Can we see a further drop in prices in the near future?

India being a price conscious market, and with capacities in personal storage segment growing, price will be dropping regularly. We can see the same in hard disks, flash drives and other products in the IT accessories range.

Create web runtime applications for MeeGo

Rahil Banthia

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The web runtime on MeeGo lets you create applications using web technologies such as HTML, JavaScript, CSS, and web services/APIs that look and feel like other locally installed native applications. These applications are called “widgets” – because they are built and packaged according to the W3C widget family of specifications.

On an actual MeeGo device, the web runtime widgets are launched from the same place as other apps – i.e. the MeeGo Applications zone. There is no “web browser UX” surrounding your app – just the normal look and feel of a MeeGo app. They are even installed



Fig. 1: You can create web runtime environments in MeeGo

like other apps using the widget-installer tool.

The Web SDK enables web runtime (WRT) development for MeeGo, as shown in Fig. 1. Coding for the Web Runtime on MeeGo is very easy and requires only a MeeGo operating system image, the web runtime packages and a text editor in order to get started. The Web SDK, which can be downloaded from <http://bit.ly/e6NeuM>, provides a full development environment with support for creating

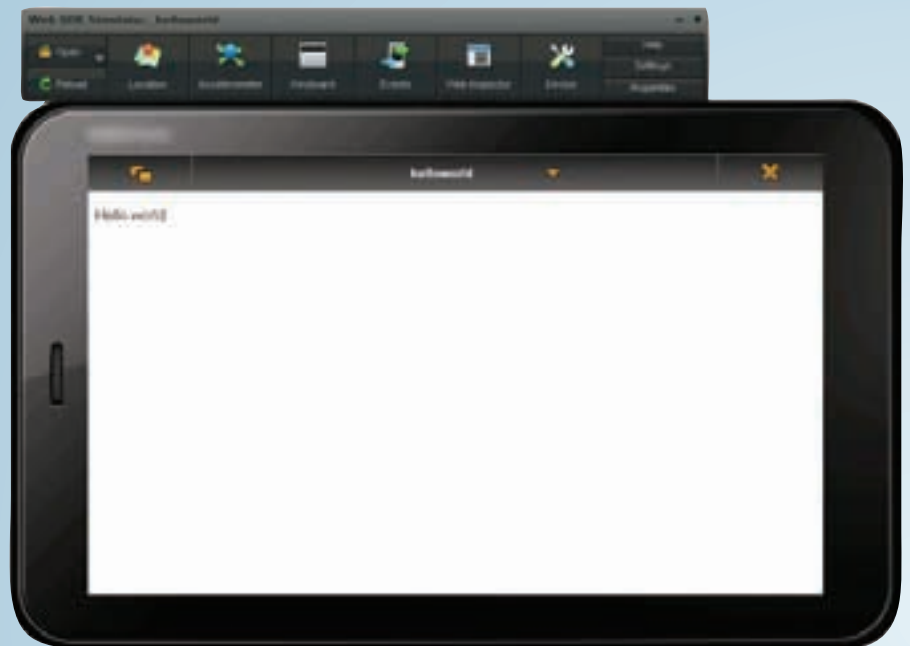


Fig. 2: The simulator displays your app

MeeGo WRT apps. It includes:

- the Web Developer Environment
- the Web SDK Simulator

Your widget is essentially a bunch of code and content packaged in a zip file - but renamed to use

the “.wgt” file extension. Whatever you put in this widget package is what gets installed on the device, and will generally stay there for the installed lifetime of the widget.

Lets build a simple “hello world” web-runtime application which displays a form for a user to enter their name. We will also write JavaScript to respond to the user’s input and display a personalised greeting.

- Start WDE. Click on File > New > web app (wgt).

- Choose Basic web app project and click on Next.
- Enter the project name and choose a directory to create the project in.
- Enter a unique identifier for your Web App and click on Next.
- Enter names for the three files which will form the basis of the Web App (the defaults are fine for now).
- Click on Finish.

Your project will now be visible in the File view, under Projects. Double-click on the index.html page. You should see the source of the HTML file in the main panel.

Add a paragraph inside the <body> tag, for example:

```
<p>Hello world</p>
```

To preview the Web App in the simulator:

- Right-click on the project name in the Project Explorer.
- Select Preview Web app from the context menu.
- The simulator should start and display your Web App as shown in Fig. 2.

Interactivity is added to Web Apps by writing JavaScript functions and hooking them to the interface. You can add your own functions to the basic.js JavaScript file, automatically created for your project by WDE. Start by editing the index.html and adding a form with a text entry box:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Greet</title>
    <meta http-equiv="Content-Type"
content="text/html; charset=UTF-8"
/>
    <script language="javascript"
type="text/javascript" src="basic.
js"></script>
    <link rel="stylesheet"
href="basic.css" type="text/css"/>
  </head>
  <body onload="init();">

    <!-- form to enter a name -->
    <form method="post"
action="index.html">
      <p><label for="name">Name</
label>: <input type="text"
name="name" id="name"/></p>
      <p><input
type="button" value="Greet"
onclick="greet();" /></p>
    </form>

    <!-- greeting will be displayed
inside this paragraph -->
    <p id="greetings"/>

  </body>
</html>
The button's onclick attribute
is set to the greet() callback,
which we add to basic.js:
function init() {
}
function greet() {
  var name = document.
getElementById('name').value;
  if (name != '')
    document.
getElementById('greetings').in-
nerHTML = "Hello " + name;
}
```

Open index.html in the simulator tab again. Enter your text in the text box and click on the Greet button to call



Fig. 3: Your customised greeting displayed

the JavaScript function and display a greeting, as shown in Fig. 3.

Debugging

WebSDK provides debugging for Web Apps running inside the simulator.

- Add a breakpoint to the basic.js file by double-clicking in the margin next to a line of code, as shown in Fig. 4 below.



Fig. 4: Double-click in the margin to add a breakpoint

- In the Project Explorer, inside the expanded project content, right-click on the index.html file and select Debug As > Web Application. This starts the application in the simulator, and switches WDE into debugging perspective. If the perspective doesn't change, go to the Window menu and select Open Perspective > Debug.
- Use the Web App in the simulator.

You should now see the Debug perspective, with a cursor at the breakpoint.

- When you've finished examining the state of the application, adding expressions etc., use the buttons along the top of the Debug view to continue, step etc. through the program.

Packaging

Web Runtime applications on MeeGo use the wgt packaging format: it's a zip file with configuration metadata in a config.xml file. The configuration follows the W3C Widget Packaging and Configuration specification.

It is very simple to create a wgt package from a project:

- Right-click on the name of your project in the Project Explorer and select Package Web app.
- The output file is called <your project name>.wgt.

Once you have created a wgt package, you can transfer it to your device and run it. WDE also has a Deploy Web app option, but requires Bluetooth.

Installing the Web App

To install the qt-web-runtime packages on the target MeeGo device:

```
$ zypper install qt-web-
runtime
```

Once the Web Runtime components are installed, install your new Web App:

```
$ sudo widgetinstaller <path
to .wgt file>
```

This creates a new .desktop file in /usr/share/applications/ for your Web App.

Running the Web App

To run your Web App, click on its icon in the Applications zone; or, run it from the command line with:

```
$ webwidgetrunner <path to
.desktop file created in
previous step>
```

Now that was simple, wasn't it?

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Contest closes on July 27, 2011

- When you perform an action which will cause the code at the breakpoint to be executed (in this case, clicking the button), the simulator pauses and passes focus back to WDE. WDE may prompt you to confirm the switch to the Debug perspective: tick the Remember my decision box and click Yes, so that the perspective automatically switches in future.

Google Code

Google Code offers inbuilt editor based on CodeMirror for making small edits online

Compiling online

Services like Amazon EC2 let you "hire" a virtual machine online, which you can use to do anything, including compiling complicated code

Coding in the Clouds

Web development is becoming increasingly popular, so why not develop right in the cloud as well?

Kshitij Sobti

ksbitij.sobti@thinkdigit.com

Cloud computing has taken off with a bang even though people rarely realize what it means. Our social interactions are in the cloud with Facebook, Twitter, IM and Mail, creating documents, editing pictures, and a whole lot more, can now be done entirely on the cloud. So why not build the next generation of cloud applications in the cloud as well?

A few months back we took a look at online code hosting services, that offered a mixture of social networking and coding. Social networking might not seem a good mix with development, but open source coding (and coding in general) is a very social thing as many developers get together to develop a software further. Just as the internet and social networking have brought people together across the globe, the internet has been a huge catalyst in making open source software development by a community possible.

Imagine then if you could code an application online, compile it there and publish it online immediately? Once you take a look at the services mentioned below, you will realize that that future is only a stone throw away.

Cloud 9 IDE

Cloud 9 IDE is an online IDE by Ajax.org that uses an editor called Ace developed by them. As an IDE Cloud 9 is quite powerful, and offers project management dashboard that lets one create or import projects, manage teams and

organization contexts. Cloud 9 IDE can directly work on your GitHub projects, and can even use your GitHub details to login to Cloud 9 taking advantage of the collaboration facilities of GitHub.

Cloud 9 is intended to be an IDE for web developers developing using JavaScript. It itself is built on JavaScript, and uses Node.js on the server-side. It is thus perfect of developing Node.js applications as it offers debugging and online testing facilities for the same.

Being an IDE it offers some features you'd expect of any desktop IDE. It has a multi-tab interface, a tree-view of project files and even support for extensions, a number of which are preinstalled an activated. Node.js applications can even be run straight from the browser allows you to test then inside the interface.

Cloud 9 includes a panel to view the output generated by running programs. Additionally, an included console lets one run a subset of shell commands to manage your project, including "git" command to manage your project repository.

Being an online IDE, it enhances collaborative working with other people in your organization / team, and chatting with team members while working with them.

Cloud 9 is a free service for open-source projects, however has a subscription-based fee for those that require private projects.

CodeRun

CodeRun brings some remarkable features considering it is running in the browser. The IDE supports development in C# and .NET 3.5, PHP, JavaScript, HTML and CSS. It allows for C# development in ASP.NET, WPF, and Silverlight.

For C# and .NET it supports compiling, testing and debugging application online itself, straight from the browser. For this it includes an debugging panel with a tabs for output, call stack, and for watching expressions. In case of errors in compiling the application, there is a panel listing errors as well. For C# code in ASP.NET / WPF / Silverlight, it is unique in offering code-completion hints (class members etc.) as are present in most desktop IDE.

To help you get started CodeRun includes templates for new projects based on a number of common web scenarios. In just a few clicks you can have a new Facebook-



Cloud 9 IDE working on multiple tabs at once.

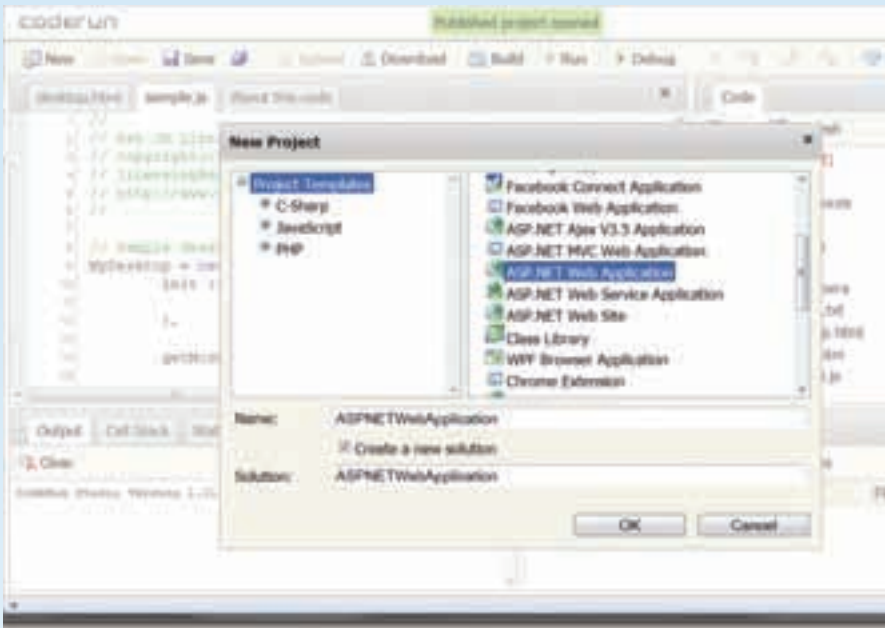
Eclipse Orion

Eclipse Orion is a project in development by the creators of the Eclipse IDE that is designed for developing web applications

Web debugging in the browser

Since browsers are the runtime for the web, browsers are well suited to debug such applications. Most browser today include debugging tools

Developer corner



Different project types supported by CodeRun, including Facebook applications and Chrome extensions

connected application, or a Chrome extension complete with manifests and icons!

Like Visual Studio, CodeRun lets you combine multiple projects into one “Solution” so you can have your PHP website, ASP.NET-based Facebook App, and a Chrome extension all in one “solution”.

Your projects can also be directly deployed to CodeRun’s hosting solution powered by Amazon EC2. This part of the service is not free, but it isn’t compulsory either.

CodeRun also lets you share runnable code, in that you can provide others a link to your project on CodeRun, however whoever opens the link will get a fresh copy of your code as it was at the time you published it, and their changes will be separate.

ShiftEdit

This service is designed to serve as a web IDE for editing your website online directly. It can connect to your website via FTP or

CODE EDITORS

IDEs are complicated beasts, no wonder they have taken so long to come online! One of the most important parts of an online IDE is the editor component. Currently there are a number of open source editor components available.

SkyWriter (earlier known as Bepin)

This was a code editor that renders your code complete with syntax highlighting and a console on an HTML5 canvas. It supported plug-ins and themes and a lot of other things that make an IDE great. We say “was”, since it no longer exists as a separate project under Mozilla, but has been merged with the Ace editor by Ajax.org which we cover next.

Ace editor

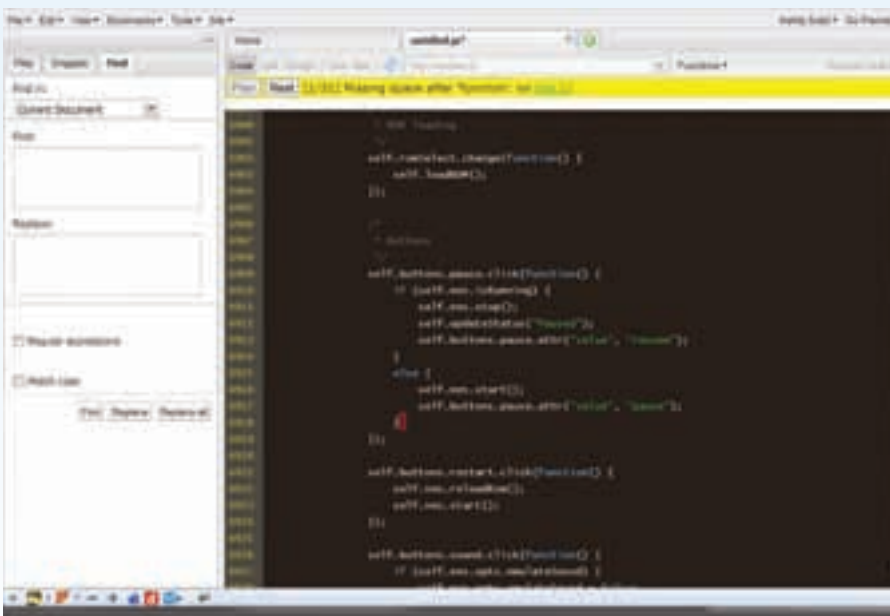
This editor by Ajax.org offers a number of great features, which after merging with Mozilla’s SkyWriter editor include plug-ins and themes. The editor offers a syntax highlighting for multiple languages, syntax checking, automatic indentation, a console, configurable key bindings, regex search and replace and much more.

CodeMirror

CodeMirror is yet another editor component that is open source. The recently released CodeMirror 2 is a complete rewrite designed to be “faster, simpler to use and less dependent on browser quirks”. The editor offers syntax highlighting for multiple languages, syntax checking, indentation, etc. It is used by Google on the Google Code site.

Ymaccs

This editor aims to bring the power of Emacs to the browser. This Emacs-like editor is inspired by CodeMirror, but is an otherwise completely independent project. It supports a lot of Emacs functionality, despite being written entirely in JavaScript, including multiple buffers, multiple frames and most Emacs-shortcuts.



The ShiftEdit IDE using the Bepin editor.

SFTP making it possible to directly edit your website and save back to it. In addition to this you also have the option of using Dropbox for your files.

ShiftEdit gives you a choice of the editor for your code via a global preference. The editors it supports are Ace, Bepin, and CodeMirror. For some file types, such as HTML, it even supports a design mode which is a WYSIWYG editor of sorts. You can even get a split view of code and design modes!

For collaboration ShiftEdit lets you share sites as a whole, you can add users via their

MiniBuilder

MiniBuilder is an open source online IDE for developing Flash applications. It itself is a Flash application.

Wonderfl.net

Wonderfl.net is another online IDE for Flash based on MiniBuilder that includes an online compiler, and publishes your compositions to a gallery on the site

MOZILLA FLIGHTDECK

FlightDeck is Mozilla's solution for building Firefox extensions online on Firefox itself using the new Add-on SDK. It offers a rich online environment for editing code and allows one to develop and share libraries that can be included in other addons. Every save of your work, creates a revision of your add-on, making it easy to revert in case of problems.

Best of all, it allows you to test the add-ons you write instantly without needing to restart the browser, taking advantage of Firefox 4's new restart-less add-on mechanism. You can make changes to your code and save it while the add-on is running, and the installed add-on will automatically be updated in the running browser.

email address, and assign them allow or deny rights. Otherwise since it uses your own FTP / DropBox account you can share directly without involving ShiftEdit.

The IDE can also integrate with revision control systems, although this bit seems to be in development. It can currently only work with SVN, in which case it offers a repository view in addition to a remote view of your files. It also lets you browse and manage revisions from its interface.

Some other features ShiftEdit provides are, search and replace operations (including RegEx) across all your files, and a bookmarks feature for quick access to important files.

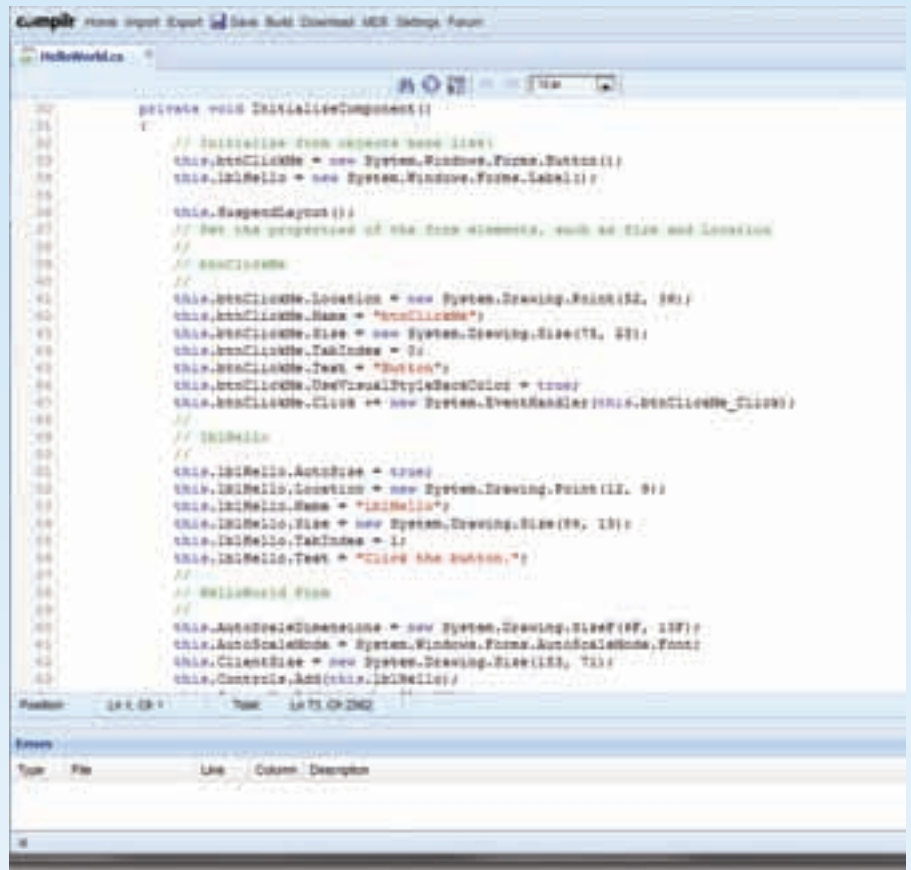
The basic IDE is free, but it has a premier version for \$5 a month that adds features such as SSL support, Dreamweaver compatibility and support for more than 3 projects at a time.

Compilr

On first glance this IDE looks a lot less sophisticated than the others, and in many ways it is. It is a project that is still in its early stages of development but offers some features that no other services do.

Compilr, as its name may suggest, includes an online compiler component that can be used to compile your application code online without downloading your code and building it yourself. This makes Compilr uniquely suitable as an IDE for desktop programming.

Currently Compilr supports compiling code written in C#, VB or Java. It supports .NET 2, 3, 4 and even XNA for Windows. The build process happens remotely, and



Compilr with a C# "Hello World" app open.

you can then download the built executable directly to your desktop and run it from there! You don't need to download multiple GBs of compilers, SDK etc just to compile an application.

This also means you can effectively write and compile Windows applications online using Linux! Sadly it currently only Windows applications are supported, (except Java), although Linux support may well come in the future.

Compilr has also added support for PHP, Ruby, and C++ although these languages cannot be compiled / executed yet.

As an IDE, Compilr has few features. The interface is very simple, with a project management pane on the right that displays files in a project. There is no menu at all, merely buttons for importing / exporting projects, building, downloading etc. The editor component is quite good and stable though and supports multiple tabs. There is also an errors panel that shows rich build error information if you make a mistake.

KodinGen

KodinGen is the ultimate web development environment! It offers the greatest level of flexibility, if not the best features in the IDE department.

KodinGen offers an online environment that tries to follow the desktop paradigm. It offers a system of file associations, allowing you to select from a number of supported code editors. If you feel that a particular type of file is better handled by a particular editor, you can associate it with that type. It supports Ace, Bepin, CodeMirror, and Ymacs as editors. There is even an option to add an external editor for editing these files, although currently it isn't possible.

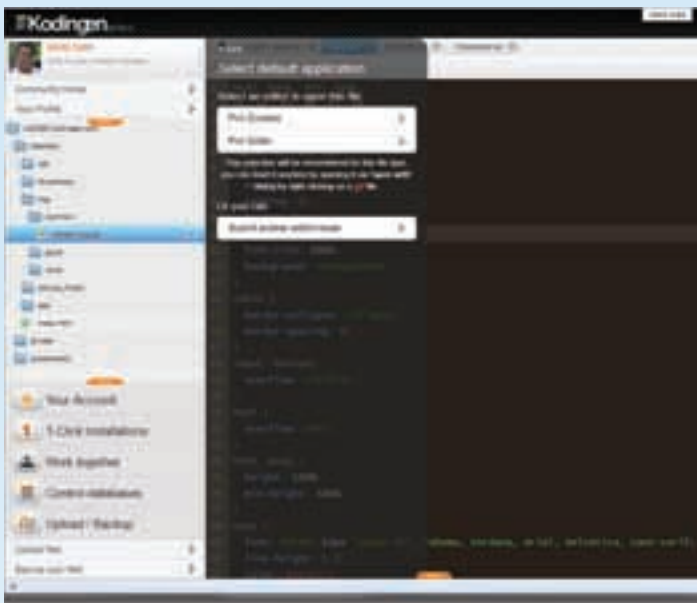
This file association and editing is not limited to just source code text files either; you can edit images as well. Currently it supports Pixlr Express and Pixlr advanced as editors for images.

The different files you edit each possibly having a different editor can open in tabs within your workspace.

Every KodinGen user gets their own

Google API Explorer

Google recently launched a new online tool called the Google API Explorer that lets developers experiment with their APIs online
<https://code.google.com/apis/explorer/>



Selecting an image editor in KodinGen while editing a CSS file in Bespin

subdomain in which they can store files and directly edit them via the KodinGen interface. You get free storage of 500GB, 1GB monthly bandwidth, 1 domain, 5 subdomains, 5 databases, and 5 FTP drives in the free quota. Each of these parameters can be individually scaled up to 100GB storage, 1 TB bandwidth, 100 domains, 100 subdomains, 100 databases, and 100 FTP drives so you get the exact mix of functionality you want. Although in its current beta state only the free account is available.

The FTP drives feature let you add external FTP servers as drives (or connect to your own KodinGen server via FTP). As for the databases you can use MySQL, and eventually SQLite and PostgreSQL as well. You can even pick the interface you want to use to manage your db (between phpMyAdmin and SQL Buddy)!


There is an app-store of sorts that lets one install from a number of applications to their domain in just a few clicks.

A large number of features are currently unimplemented, but the whole package seems like it will be brilliant when completed, considering how much is possible already.

Conclusion

Web based IDE are growing and improving trend that stand to change the way web applications are coded. Each of the examples above is unique in its own way providing a feature that none of the other do. Over time some of these features are bound to standardize.

Coding seems like the next in line for a complete social overhaul. Open source software has always been developed by using central repositories, bugbases, patch files and mailing lists. Do online IDEs stand to change all that? Not in the short term.

Currently online IDEs still fall quite short of their desktop counterparts, and the new workflows they impose break long established procedures. Over time though they are quite likely to become popular especially for web development and quick patch-work that are currently hampered by the large gap between where the code is used and where it is worked upon. 



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Case Study
Of the month



Vikram Chauhan says....



Vikram Chauhan
(IT Manager)
Olive Health Care
Daman (Gujarat)

Cost of proprietary software licenses was going way beyond 20,00,000/- which has been phenomenally reduced by Enjay and their Linux services. Enjay and its employees have helped us to reach our goal by training our desktop users & desktop administrator. They have been tied up with us for a yearly support which till now seems to be very good and significant.

Contact Details

Call us : 09376607650, 09726300114 | Email us :
linux@enjayworld.com | web : <http://www.enjayworld.co.in>
Chat ID : enjaylinux@ Googletalk, yahoo & msn
facebook : enjaylinux

Crysis 2 Review

We tell whether the latest from Crytek really lives up to its expectations or not

New Xbox, PS3 by 2014?

In what looks like an indefinite wait Microsoft and Sony are planning to introduce successors to their consoles by 2014

The Steampunk culture

Think of steampunk as a fusion of the Victorian era and science fiction. This is the kind of world which Jules Verne or HG Wells would have designed and lived in. The kind of innovations and designs that come out of the Steampunk stable are a testimony in themselves that it's a forgotten world, a world which we could have inherited had steam power been used today for most of our technology. However the lack of it still doesn't stop the steampunk aficionados to create and innovate some quirky designs. Let's take a closer look at what these are:

Steampunk Copper USB Drive

Made out of vintage watch gears and brass parts this copper USB drive comes in 2GB storage. To give it some real steampunk feel there are two copper piping along with brass bolts at the end. Pretty neat huh!



Steampunk R2D2

We bet no Stars Wars fan can ignore this! The R2-D2 droid from the Star Wars saga is immortalised in this Steampunk version. And the best part is it's not just a show piece, it's a beer barrel! Best of both worlds in one combo!



immortalised in this Steampunk version. And the best part is it's not just a show piece, it's a beer barrel! Best of both worlds in one combo!

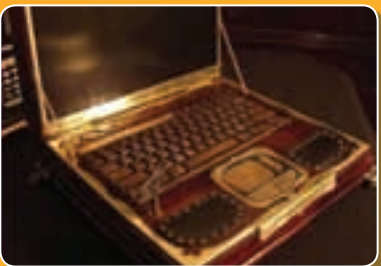
Steampunk Mouse

Wouldn't you want to use and more importantly show around a mouse this fancy? We sure would, anyhow a steampunk version in place of our regular mouse is all we ask. Looks like an offspring of an electric shaver and a mini toy tank though!



Steampunk Laptop

This is all we wanted next a 'steampunked' laptop! Inside a glass encased Victorian themed piece of wood sits an HP ZT1000 laptop. From the inside it's a sophisticated machine but from the outside it can be mistaken for a jewel-



Steampunk Pac-Gentleman

If you are living in the 19th century Pacman wouldn't be just Pacman it would be Pac-gentleman! Custom made arcade machine for an old classic game, your Steampunk collection is not complete without this

Steampunk Toilet

Well how about this? An antique toilet of the future! It's got a control panel which has different settings to tweak. It even has a laser pointing mechanism, we wonder what for? Well maybe to point and aim and have some fun while you're at it!



Steampunk'd videos

The Mysterious Explorations of Jasper Morello

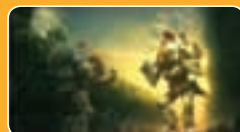
This short film explores the traumas which Jasper goes through in order to bring back his dead wife. Nominated for



Oscar and Bafta awards. Watch it here: <http://bit.ly/hdn9tt>

A Gentlemen's Duel

What happens when two men loaded with steampunk gadgets and weaponry fight over a rather large chested woman? Find out in this short animated film.



Watch it here: <http://bit.ly/hLAeaZ>

California Steampunk Convention

Have a look at some real life steampunk gadgets and outfits. This convention has it all. Watch it here: <http://bit.ly/fypeox>



Nintendo set for E3 release

Nintendo is gearing up for it's Wii 2 release at the next E3

RIP PSP Go

It's confirmed news that Sony will now stop producing the PSP Go so it can focus on the next generation PSP code named NGP

Unwind

Steampunk'd movies

Wild Wild West

An action comedy starring Will Smith, it featured loads of implausible steampunk gadgetry. This film serves as a parody



to the highly advanced steampunk technology showcased in it.

The Prestige

Most of the contraptions shown in the movie were inspired by the steampunk culture. A brief part of the film shows



Tesla and his creations which ultimately prove to be responsible for the protagonist's death.

Sherlock Holmes

Director Guy Ritchie gave a completely different spin to Sherlock Holmes in this movie.



The kind of inventions that Holmes does while being locked in his room are mostly inspired by the steampunk idea.

Steampunk'd video games

Bioshock Infinite

This is the third instalment in the Bioshock series, which is set to release next year.

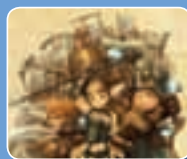
Bioshock Infinte would neither be a sequel



or a prequel to the original franchise It's set in a totally different world and time.

Neo Steam: The Shattered Continent

Based in a time earlier than the ancient wars, the game features a civilization which co-exists peacefully within



a universe of technology and magic. Neo Steam is an MMORPG game

Rise of Nations: Rise of Legends

Spin off on the popular game Rise of nations, this title is RTS based. Published by Microsoft, players can choose from three types

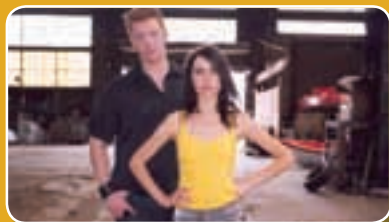


of races. Each one of these is completely different offering new game play each time.

How we unwind

Desert Sessions

This time we tasted music which suits more for bike rides. We're talking about Desert sessions band which makes you want to get out of the four walls of your house and let some air in your hair.



Dragon Age 2

We thoroughly enjoyed our time with DA 2. It's definitely better than



it's old versions, we experienced some best RPG combat ever. However we felt that the story telling could have been a lot better.

Pandorum

One of the best sci-fi movies of 2009 it's a must watch for lovers of alien themed films. Two crew members



wake up from hyper-sleep to realise something has gone terribly wrong. What they find out does not look good!

CRYSIS 2

Just another cheat-happy wimp
readersletters@thinkdigit.com

First up, this is neither a walk-through nor a gist of the storyline of *Crysis 2*. After the hype of the first part, if you still don't know what *Crysis* is about, crawl back under that mouldy rock you emerged from. It's completely pointless to go into the storyline of this game because if you have a capable PC, and like FPS games, you will get your hands on this title. Actually, even if you don't have a capable PC, you'll still probably play it anyway.

It's always been pointless, in my humble opinion, however, to play *Crysis* on anything but the fastest hardware your money can afford. It's always been a visual franchise, with eye-candy galore. It's also the first game that

8.0
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made me feel like I'm playing with semi-God-mode turned on – with the new Nanosuit 2.0's Power mode, both strength and speed are enabled together to allow you to manhandle aliens and humans alike; go into Stealth mode to stalk enemies and even evade them; and of course Armor, which means you're about as vulnerable as a president's bulletproof motorcade – for about 20 seconds only unless you cheat.

It's not like this game's easy though. I first played it in Recruit mode since my gaming skills aren't what they used to be. Soldier or Veteran mode is the one fans will choose to play – unlike wimpy little me who had a deadline to write this article and just wanted to finish playing the game.

Recruit difficulty is like playing the game with you dressed in Armor, and with the enemies half-lobotomised.

There's hardly any AI to speak of in the beginning but they get a wee bit tougher as the campaign progresses. Like butterflies turning into

What's good

- Great graphics, as expected, but pretty decent AI in Soldier mode
- Very nice background score that sticks in your head.
- Seems to perform better than *Crysis*
- Suit control is easier

What sucks


- No more punching
- Very linear, and maps aren't as huge as I'd like
- Campaign is too short

Suggested System Requirements for 1920x1200

CPU: Intel i5 / Athlon X6 (3 GHz)
GPU: GTX 260 / HD 6850
RAM: 4 GB
Windows 7 with DX11
12 GB free HDD space

rabbits – what? Rabbits have bloodshot eyes, they're scary I tell you!

Graphically speaking, there's a 3D mode available, but I liked what I had for lunch today, and felt like keeping it down for a change. We've seen a little too much of New York being destroyed, whether in a game, movie or on CNN, but this still has some interesting shots. Why do they always destroy the Statue of Liberty though? It's like *Aliens* land and say, "Hmm that looks important, let's squish it!", even though there's no people or armaments anywhere near it.

Anyway, as you've no doubt noticed, so far I've just given you a bunch of useless information and some personal remarks, but not really told you how good or bad this game really is. That's because I played the game without reading any of the reviews or comments about it first, and that just meant that I had to figure out things for myself, and with a game this short, you need all the help you can get to extend the play time. In fact, I'd say don't even bother reading any more reviews, just go play it and make up your own damn mind.. 

See! Evil-looking and about as scary as the enemies in Recruit mode



Batman worshipers!

We all have some sort of a fetish for our favourite superheroes. Well, calling all Batman fanatics out there. Read more on <http://bit.ly/gH4wsV>

Duke Nukem plot leaked?

Can't wait to get your hands on Duke Nukem when it finally releases? Here's good news, its entire plot and hi-res images are out. More on <http://bit.ly/X8vys>

SKOARI Review



de blob 2

8.0
10

Faiyaz Shaikh

readersletters@thinkdigit.com

De Blob 2 picks-up the trail of our hero a couple of years after his stand-off with Comrade Black in the series' debut game. The events leading up to De Blob 2 is chronicled in the game's DS version which has been developed as a 2D platformer by Halfbrick studio. The game under discussion here however, is the Xbox 360 version in which De Blob and his side-kick Pinky once again find themselves at odds with Comrade Black, who has appeared in Prism City under the guise of Papa Blanc.

Paint it black

The game's central theme is pretty much in keeping with the premise of the franchise which is a conflict between Comrade Black, who is heel-bent on riding the world of its color and De Blob, who insists that the world is better off with more than one color. By the time De Blob and Pinky reach Prism City, Comrade Black and his minions have a firm grip

on the lands that are left devoid of color. Being a ball of paint, De Blob instinctively gets to the task of painting the lands with a color of choice. Restoring color liberates the land and its people, while at the same time diminishes Black's influence. There are various challenges strewn across the game-world—some of which are optional, while others are tied to the game's storyline. Completing storyline challenges brings De Blob closer to a transformation engine at the end of each level.

Pocketful of rainbow

Each time De Blob takes an action like painting objects or pulverizing enemies he loses paint-points, which can be replenished by various means. The amount of paint required to take an action varies and certain actions can only be carried out if De Blob is carrying

a specific color. This compels the player to constantly seek reserves of paint of varying colors. This explorative game-play is balanced by a timer that starts counting down at the beginning of each level. When this timer expires the player has a choice to either continue from the last checkpoint or to restart the level. Completing optional objectives rewards the player with pickups that add to a level's time limit. It is quite important to keep an eye on the timer at all times, since it is very easy to get side-tracked by optional missions.

The Old Master Painter

This time around, De Blob can improve his abilities by spending 'inspiration' points that are largely available as pickups in the game-world. Alongside the side-missions, there are quite a few collectible items to keep one busy, should they choose to revisit a liberated area of the world. Also, after beating a level it becomes available in the games 'party' mode which allows another player to join in for some co-op action.

This game's looks can be deceptive as under the warm and fuzzy appearance, De Blob 2 is quite a serious and challenging game. It may seem like an elaborate painting game, but it is more of a platformer than that. I often found myself running out of time and having to retry a level multiple times--but I should also point out that my platforming skills are not exactly sharp.

The game's visuals are well supported by some good music that is of finer quality than usual and is also nicely tied into game-play. If you are tired of watching guys in military armor shooting at each other against drab backgrounds, then De Blob 2 should make for a good salve against the monotony. **d**



Wii 2 update

Will the new Wii feature controllers with a 6 inch screen? It's also rumoured to have eight buttons, two analog sticks and a camera

New Harry Potter game

New instalment in the Harry Potter franchise will debut a day before the movie is released

Top Spin 4

Faiyaz Shaikh

readersletters@thinkdigit.com

2K Czech, and what is left of PAM development, have returned with next installment in the Top Spin series after a hiatus of nearly three years. By far, the most significant change (or improvement) with the latest iteration is the control system. Since there were sizeable bunch of gamers that found Top Spin 3's control scheme hard to master, the developers have overhauled the system to create something that scales very well.

There is a good deal of content squeezed onto the disc, with a roster that boasts about 17 active professional players, along with eight retired legends of the sport. Additionally, there are also seven tournaments and a total of 36 venues. The game has a single-player career mode, an online World Tour mode via PSN, and an offline party-mode called 'King of the Court', wherein the winner stays back and a new challenger takes over the second controller.

Elegant control


In my opinion, the most elegant feature of Top Spin 4 is its intuitive and adaptable control system. For those who find the more advanced concept of this sport a bit

esoteric, the game can be effectively played using a single button and the directional controls. This kind of game-play is perfectly suited for a casual match against an opponent of equal skills. However, bringing down the likes of Djokovic and Federer requires use of various spins and shot modifiers to exploit the opponent's weaknesses. Without going into the game's menu system, a player can decide to go for some more advanced shots in the middle of a match. Within the same control system, holding down a face button for a specific period will set up a power shot; whereas hitting the same button right before swigging unleashes a controlled shot with deadly precision.

Taking center court

The game's single-player career mode is quite a satisfying experience and a fulfilling way of honing game-skills. This mode starts with the rigmarole of avatar creation and customization options like facial appearance, sports gear, playing style (Serve and Volley, Offensive Base-

line and Defensive Baseline) and a couple of animation choices. A bit of nice touch in the Career Mode are coaches who task the player to complete certain objectives before providing benefits like skill boosts and special abilities. This, along with completing matches, is rewarded with experience points that go towards increasing the player's level. Player's skills are passively increased when selecting one of three playing styles after each level-up. Character progression is a choice between focusing on a single playing style or distributing points across different styles to avoid any glaring weaknesses. Players level-up at a fairly brisk pace, which is an added incentive to create multiple players with varying combinations of playing styles. The game's AI is quite timid, until the player reaches the top leagues with Grand Slams and World Championships. This actually works to the game's benefit as the AI scales in tandem with character progression. So by the time the big tournaments become available, the player is maxed out at level 20 with a fully unlocked, top-notch coach.

Top Spin 4 is a pretty solid tennis simulation in spite of a couple of shortcomings, which makes the game easy to recommend. However, with a new Vitua Tennis just around the corner, you might want to hold on for a few days. 

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High-quality texture pack

BioWare has released a high-quality texture pack for Dragon Age II. Download it for better graphics

Upcoming BioWare projects

BioWare's is also involved in Star Wars: The Old Republic, an MMORPG set in the KOTOR era of the Star Wars universe

SKOARI! Review

Kshitij Sobti

kshitij.sobti@thinkdigit.com

Dragon Age: Origins managed to garner some impressive accolades despite numerous flaws and Dragon Age II follows suit by bringing in as many flaws as it fixes. You know, just to keep things balanced.

It is set as a framed narrative; the story of Hawke as told by Varric, a suave dwarf. Hawke (i.e. you) were in the center of events that led to the current crisis in the world, and your companion Varric is being interrogated to understand how things turned out the way they did. He tells of you rise to power over a decade from a refugee to the champion of Kirkwall and beyond.

Varric isn't adverse to exaggerating or lying of your exploits in the story he is telling, a point that is quickly picked up by his future interrogator. In fact the first few minutes of the game tell the legendary version of Hawke's story where his abilities (and his sister's bust size) are greatly exaggerated.

Despite your story being a flashback, you know little of what it is you're supposed to achieve at the end! What happened, and why are you important, such things were clearer in the first game as your role was defined from the beginning.

It works well for the story, as you feel like you are caught in the events instead of someone with a clear mission or goal. This also means that for the most part, you are unaware of where you are heading. You complete quests to move ahead, but each quest seems insignificant as the sum of the parts will only come at the end of the game.

Your companions have a bigger role to play and their stories have relevance to the plot instead of simply being quests to gain approval. Often they are the catalyst for the events that lead to your rise in

power. Rather than hanging around in a "party camp" like zombies waiting for the next apocalypse, they have their own hangouts that you will need to visit occasionally to move forward their story.

The old approval system for companions is gone, replaced by a new friendship / rivalry system that lets you get companion quests even if you aren't the bestest of buds. The system is still imperfect though, as you need to be friendly enough or a big enough rival, since being a neutral friend has fewer benefits.

Dragon Age II now has a skill tree rather than a linear progression of skill. Some skills can be upgraded making them more powerful / less expensive. This has its benefits, but it

does make combat less varied as you'll probably have fewer skills. Despite ending both Dragon Age: Origins and Dragon Age II at level 23, I ended with 30 different usable skills in the former while in the latter it was a mere 13.

Even so, combat is more responsive, and dynamic, a huge improvement over Dragon Age: Origins, which seems like a few 90-year-olds discussing medications in comparison. It still has its flaws though and it is clear BioWare still hasn't figured out the right balance in combat as the game mostly isn't challenging at "Normal" difficulty, yet gets disproportionately tougher during "boss" fights.

When it comes to graphics Dragon Age II is a huge improvement. The graphics and textures are much better, crisper, and less... brown. It holds up well especially for an RPG.

If you were wondering how BioWare managed a full sequel in less than two years while still releasing a string of DLCs and an expansion pack for the first, it becomes clear as you play the game. Firstly, you can only play as a human, mage, warrior or



8.0
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rogue with only one origin story. Secondly the game is set in a much smaller location of Kirkwall and surrounding areas. Using a day / night switch the same areas offer different quests. Finally, and most frustratingly, maps have been excessively reused. Every warehouse, and worse, every cave looks the same! With minor changes they have created an illusion of variance that doesn't last.

The game is also much shorter, and will barely push past 50hrs while the first game could easily extend beyond 80 hrs. This isn't a criticism though, it's shorter length doesn't hamper its quality, but merely explains its quick release.

Verdict: Overall Dragon Age II is a great game and a worthy sequel which is let down by poor combat balance, overused locations and numerous bugs — most have been fixed since release. The subject matter Dragon Age II deals with is a lot of what was left out, or glossed over in the first game, now explored with the kind of depth it deserves. The game improves over the first in many ways but brings enough changes and flaws to alienate some of those who loved the first game. **d**

Pros:

- Improved graphics
- More engaging combat
- Better, more involved characters
- Marvelous story

Cons:

- Less variation in maps
- Numerous bugs
- Poor combat balance

Details

Genre: Role Playing Game
Studio: BioWare
Publisher: Electronic Arts
Platforms: Windows, Mac OS, PS3, XBOX 360



Those stereotypes are true?

A new report suggests Mac users are younger, more urban and, yes, hipper than PC users

Community site for ideas

Newly launched website www.ahhha.com lets users submit their ideas, while others vote them up or down

Head over to www.thinkdigit.com/forum, for some of the best discussions, buying advice, and user reviews. Of course, you will meet like minded (and not so like-minded) geeks, leading to some of the most constructive arguments you'll ever have.

Check out this thread below - **The PC Buying Guide for April 2011**

Curated by distinguished forum members such as ICO, Topgear, The Sorcerer and others, you are bound to get some accurate suggestions on which system configs to go for. There are many price ranges and even PhysX configs to choose from. Shortlink : <http://bit.ly/digitcom1>

09-03-2011, 09:39 PM

Jaskanwar Singh
amd64 - i7-2600

Join Date: Feb 2010
Location: GPU World
Posts: 3,910

PC Buying Guide - April 2011

Sub 50k (Mid range gaming)

COMPONENT	MAKE	PRICE
Processor	Intel Core i5 2400	9500
Motherboard	Intel DH67CL	6500
RAM	G.Skill Ripjaws F3-12800CL9D-4GBRL	2500
Graphic Card	Sapphire HD6850	9500
HDD	Seagate 500GB 7200.12/ WDC 500GB Blue	1700
DVD Writer	LG 22X SATA DVD	900
PSU	Corsair VX450W	3500
Case	CM Elite 430	2500
Monitor	Benq G2220HD	7300
Mouse and Keyboard	Razer Cyclosa Gaming Bundle	2000
UPS	Numeric 800VA	2500
Speakers	Altec Lansing VS2621	1600
	Total	50000

12-03-2011, 09:12 PM

rchi84
Apprentice

Join Date: May 2009
Posts: 95

PC Buying Guide - April 2011

Very nice update Jas. Looks really good may god bless you with enough money to actually buy one of those high end rigs lol

15-03-2011, 02:15 AM

aby geek
In The Zone

Join Date: Jun 2007
Posts: 425

PC Buying Guide - April 2011

Doubtfull about the PSU. Make it VX550 for few hundred rupees more. And yes you forgot the hard drive too. Also wont NZXT gamma be a better choice?

15-03-2011, 02:15 AM

Cilus
The Architect

Join Date: Mar 2009
Location: Kolkata
Posts: 1,306

PC Buying Guide - April 2011

Quote:
Originally Posted by masterkd
isn't initial setup for using physx card with amd gpu is heck of a deal..it requires some dummy monitor setup and software crack, right?

No it is not a heck of a deal and does not require any multi monitor setup. A software hack is required only which is pretty simple to use. Anandtech has a great review and how to do guide for using nVidia card as PhysX with a Radeon card.

21-03-2011, 04:12 PM

vikrammomaya
Right Off the Assembly Line

Join Date: Mar 2011
Posts: 3

PC Buying Guide - April 2011

NZXT Phantom is a good case for around 8.4K.. It looks better than the HAF series.. and there is not much difference in performance. can be used for the 100k + configs.

Tech used in IPL

The whole country seems to be smitten by the IPL bug and what makes it all the more exciting are the review options which can change the game. Use of technology in cricket is not a new thing, however the way it has evolved over the years has made the game more precise and accurate. Let's have a look at some of the most celebrated technologies in cricket and used more recently used in the IPL.

Hawk eye vision: One of the most sophisticated techniques devised in cricket is the Hawk eye vision. It comes into effect to know whether the batsmen is out or not. It's basically a complex computer program which predicts the trajectory of the ball once it leaves the baller's hand. The Hawk eye follows the most predictable way in which the ball goes, this is based on the line, length, wind pressure and the force by which the ball hits the pitch. All of this data is then computed by



Cumulative view of an over from Hawk eye

an algorithm and the decision is given by the umpire based on that. It still isn't the most full proof method but it's as close as it gets to reality.

Snicko: The snicko-meter graphically represents a sound wave which is produced when the ball hits the bat or the batsmen's pad. The snicko which is a tiny device is placed in one of the stumps which essentially is a tiny microphone connected to an oscilloscope. Every time

the ball nicks the bat snicko picks up the noise it creates and displays it to the third umpire to review the decision.

Stump cam: is miniature camera which sits at the edge of the wickets and displays images from pitch length perspective. There is a radio transmitter built in the cam which sends these images to the control room via radio waves.

Wagon wheel: depicts the pattern in which the batsmen has scored runs in all four directions. This pattern is visually represented using colour codes. There is a different colour code for sixes, fours, twos and singles.

Speedo-meter: analyses the speed at which the bowler is throwing his deliveries. Radar gun installed in the direction in which the ball is thrown catch the velocity of the ball and calculates the speed in which it's travelling. This is based on Doppler effect.

Hot spot: This innovative technology makes use of two infra red cameras installed at both ends of the ground and records images continuously. Everytime the bat nicks the ball the Hot Spot creates a prominent white spot on the screen making it easier for the umpire to track the point of impact. This system is still under ICC's review and we might see it's use in the coming years.

I always wondered what is a?

CMS: expands as content management system which essentially is a software that allows you to maintain your content on the web be it images, videos or text. In order to use a CMS you don't require advanced HTML skills or know in-depths of a coding language. Using a CMS you can add and update content at your discretion without involving a designer or paying for one. Famous examples are Drupal, Joomla and DotNetNuke

API: Application programming interface is used to add additional functions to an application. API determines the amount of plug-ins that can be added to the existing system

beta versions: beta is a version of any software or app which is still under developmental phase but is made available to users. This is done in order to find and repair any glitches that might be existing, so that once the final version is out it's as perfect as possible

Blog: blog can be anything from an online diary to a news page which gets updated frequently. It's a common CMS plugin.

Forum: a bulletin board (BB) is more popularly known as a forum. It's a section of a website which accepts text updates from members and often results in building up of a community of sorts. Vbulletin is a popular forum building software.

FTP: File transfer protocol is used to transfer large or multiple files, it's used for uploading web pages or downloading large files.

Database: core of any dynamic site or structured collection of data is known as a database. Data is held in rapidly -accessible format by a database application. Famous example for web servers is MySQL

Internet vs. the Web

You may have often used the term internet or web interchangeably, which may or may not be known to you. However most of us quite often end up using the wrong term at the wrong place. The Web and the internet are two different things and would not work without the other anyway.

The Internet: is a massive of collection of networks, generally speaking it's a networking infrastructure. Millions of computers all over the world are connected via the internet. Any computer can communicate with any other one as long as they both are connected to the internet. This is possible because of a variety of languages known as protocols.

The Web: (World wide web) or web is the medium of accessing information over the internet. Think of it as a information sharing model built on top of the internet. HTTP protocol is a language spoken over the internet to transfer data. HTTP protocol is used by web services to allow applications to communicate with each other. In order to surf the web you have to make use of a browser such as Opera, Firefox or Chrome.

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